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SENATE

{ REPORT
No. 98-85

A RESOLUTION TO APPROVE THE OBLIGATION AND EXPENDITURE OF FUNDS FOR FULL-SCALE ENGINEERING DEVELOPMENT OF A BASING MODE FOR THE MX MISSILE

MAY 12 (legislative day, MAY 9), 1983.—Ordered to be printed

Mr. HATFIELD, from the Committee on Appropriations,
submitted the following

REPORT

together with

ADDITIONAL AND MINORITY VIEWS

[To accompany S. Con. Res. 26]

The Committee on Appropriations to which was referred the concurrent resolution (S. Con. Res. 26) to approve the obligation and expenditure of funds appropriated in Public Law 97-377 for full-scale engineering development of a basing mode for the MX missile, favorably thereon without amendment and recommends that the concurrent resolution be agreed to.

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INTRODUCTION

Pursuant to provisions of section 101(c) of Public Law 97-377, the continuing resolution for fiscal year 1983, S. Con. Res. 26 is the legislative vehicle by which Congress may approve or disapprove the actual obligation and expenditure of \$560,000,000 already appropriated for full-scale engineering development of a basing mode for the MX missile and \$65,000,000 already appropriated for flight testing. By law, in order for such funds to be made available the resolution must be approved by both Houses of Congress. This report presents the major issues confronting the selection of a basing mode for the MX missile and states the Committee's recommendation on the resolution of approval for the expenditure of funds. The provisions of S. Con. Res. 26 are established by law, as are procedures for debate on the Senate floor, and that the scope of formal consideration is limited to that of a basing mode for the MX missile. The Committee's action on S. Con. Res. 26 should not, therefore, be construed to authorize the obligation of funds for any program, project, or activity other than funds already appropriated for full-scale engineering development of an MX basing mode and for flight testing of the MX.

I. LEGISLATIVE HISTORY SINCE 1973

The MX missile was first proposed for development under the Air Force's advanced ICBM technology program in 1973 and later that year Congress appropriated \$8,000,000 for advanced ICBM technology. This new multiple warhead missile was originally designed to be deployed in fixed Minuteman silos. However, the Defense Department became increasingly concerned about the future vulnerability of the Minuteman silos to a Soviet counterforce attack and later redirected the program toward finding a more survivable basing mode.

In 1976, the Ford administration moved in this direction by proposing to initiate full-scale engineering development (FSED) of the MX missile in the buried trench basing mode. The program called for commencement of FSED in October 1977, leading to a 1984 initial operating capability. Upon entering office in 1977, President Carter deleted funds for MX full-scale engineering development, and Congress agreed that a study be conducted of the trench basing mode. Cost issues and concerns about nuclear effects on the trenches led to examination of both vertical and horizontal MPS (multiple protective shelters) basing modes. In 1978, the Defense Science Board Task Force on ICBM basing completed its study and recommended vertical MPS basing for the MX. However, the Carter administration, concerned about SALT verification and missile concealment problems of that basing mode, chose instead to adopt horizontal MPS deployment.

In September 1979, President Carter announced plans to begin full-scale engineering development on the MX and deploy the missile in the oval, "racetrack" horizontal MPS basing mode. A 200 MX missile-4600 shelter system, costing \$33,800,000,000 (in fiscal year 1980 dollars) was proposed. The date for initial operating capability for MX under this plan was 1986. In November 1979, the Defense Science Board reconvened to refine the horizontal basing mode concept. Subsequently, in 1980 the horizontal MPS basing mode was modified to provide for a separation of the launcher from the transporter. The road system was changed from an oval to linear configuration.

Led by concerns over environmental impacts and costs, Congress was reluctant to preclude examination of alternative basing modes for the MX. The Stevens amendment to the Fiscal Year 1980 Defense Appropriations Act, adopted unanimously by the Senate, directed that: "None of the funds appropriated under this paragraph to continue development of the MX missile may be used in a fashion which would commit the United States to only one basing mode for the MX missile system."

II. ACTIONS OF THE 97TH CONGRESS

Upon entering office in 1981, the Reagan administration announced its support for continued development of the MX missile, but also decided to reexamine the basing issue. In March 1981, the Townes panel was commissioned to review alternate MX basing modes and later that year with ~~few~~ support for deployment of the MX missile in an MPS basing mode, citing its concern that the Soviet Union could further fractionate warhead deployment on its ICBM's to offset multiple shelter MX basing.

In October 1981, President Reagan, as a part of the comprehensive strategic force modernization package, announced the cancellation of MPS basing for the MX missile. Instead, it was recommended that an interim basing plan be approved to deploy 40 MX missiles in super hardened existing silos, and also that research and development continue on a long-term basing mode for the MX. Three long-term basing mode candidates were selected: continuous patrol aircraft, deep underground basing, and ballistic missile defense.

In 1981, Congress appropriated \$1,913,000,000 for MX research and development but also adopted a Cohen-Nunn amendment which restricted the use of such MX funds for super hardening existing silos as an interim basing mode for the MX.

In 1982, the President submitted a budget request of \$1,497,000,000 for procurement of nine missiles (plus spares) and \$2,759,000,000 for research and development, of which \$310,000,000 was for R&D on the long-term basing options. The Fiscal Year 1983 Department of Defense Authorization Act reduced the MX authorization to \$988,000,000 for procurement of five missiles and \$2,509,000,000 for research and development. The authorization conference committee also directed that a decision on a permanent MX basing mode be made by December 1, 1982. Of the \$775,000,000 provided for MX basing, \$715,000,000 was not to be obligated until the President completed his review and se-

lected a permanent basing mode. For the second time in as many years, the Congress rejected interim basing for the MX, as proposed by the President in October 1981, and redirected U.S. efforts toward achievement of a permanent basing mode.

HISTORY OF MX RDT&E FUNDING

[Dollars in millions]

Fiscal year	Advanced ICBM technology	MX development
1973	7.9	
1974	4.2	
1975	39.3	
1976	36.0	
1977	12.9	
1977	69.0	
1978	134.4	
1979	158.1	150.0
1980		670.0
1981		1,491.0
1982		1,903.0
1983		2,506.0
Total	461.7	6,720.0

Source: Department of the Air Force.

President Reagan reacted to congressional action even before final passage of the Fiscal Year 1983 Defense Authorization Act in August 1982, by ordering the Department of Defense to redirect the MX program to achieve a permanent basing mode with an initial operating capability of 1986. Pursuant to National Security Decision Directive No. 35, President Reagan provided guidance to the Department of Defense to come up with a recommendation on long-term basing for the MX so that he could forward a selection to Congress by December 1, 1982.

The chief deployment concept for a permanent basing mode was closely spaced basing (CSB). The Townes panel had recommended that there be "prompt and vigorous investigation of exploiting the use of fratricide effects among warheads attacking closely-positioned and hardened shelters" after recommending termination of MX/MPS. During its silo test program, the Defense Nuclear Agency found super hardening to be feasible. The U.S. intelligence community, the Defense Science Board, the Air Force, and the Office of the Under Secretary of Defense for Research and Engineering all studied CSB during this time, and all saw potential advantages to CSB, provided the desired hardening levels could be achieved. Opponents argued that credible modes of defeating MX/CSB could be developed. The administration argued that growth options could be added to MX/CSB to counter these threats.

On November 22, 1982, during the post-election session of Congress, and just before House and Senate action on the fiscal year 1983 continuing resolution, President Reagan formally announced his recommendation that 100 MX missiles be deployed in the closely spaced basing mode at F. E. Warren AFB, Wyo. The total acquisition cost of MX/CSB was estimated at \$26,400,000,000 (in fiscal year 1982 dollars).

On December 7, 1982, the House of Representatives voted 245 to 176 to deny MX procurement funding but agreed to continue the research and development effort by recommending an appropriation of \$2,509,332,000 for MX missile and basing development.

The Senate Appropriations Committee had recommended \$988,000,000 for MX missile procurement and \$2,449,332,000 for MX research and development. The Senate version of the fiscal year 1983 continuing resolution included a committee amendment which would have restricted the obligation or expenditure of funds for MX missile procurement or initiation of full-scale engineering development of a basing mode "until such basing mode is approved by both Houses of Congress in concurrent resolution." This language did not specify special parliamentary procedures for consideration of such a measure.

During floor debate of the fiscal year 1983 continuing resolution, the Senate adopted by a vote of 56 to 42, a modified amendment offered by Senator Jackson which continued to prohibit the obligation of \$988,000,000 for procurement, but which made the obligation and expenditure of funds for full-scale engineering development of a basing mode contingent on approval by the Congress of a basing mode by concurrent resolution of both Houses of Congress under specified procedure. As well, the language restricted the use of funds for flight testing until such time that the resolution was approved.

In addition to prescribing the procedures for congressional action of a resolution of approval, the language of the modified Jackson amendment required that the President submit a technical report to the Congress not earlier than March 1, 1983, which contains an assessment of various alternative basing modes.

The language of the modified Jackson amendment was adopted in principle by the committee of the conference and upheld on the House and Senate floors during final passage of the conference report, and is included under subsection 7 of title V of the Department of Defense Appropriations Act, 1983 which was incorporated into section 101(c) of Public Law 97-377, the fiscal year 1983 continuing resolution (98 Stat. 1846). Under terms of the conference agreement, no money for missile procurement was appropriated and \$560,000,000 for full-scale engineering development of a basing mode was to be withheld from obligation until approval of a resolution. The conferees also agreed to prohibit the use of money for flight testing until such time that a resolution of approval was agreed to. Total funds available for MX research and development was set at the House level of \$2,509,332,000.

III. ACTIONS OF THE 98TH CONGRESS

On January 3, 1983, President Reagan established an 11 member Commission on Strategic Forces, chaired by Lt. Gen. Brent Scowcroft, U.S. Air Force (retired). The purpose of the Commission was to examine the future of our ICBM forces and respond to issues raised by the 97th Congress regarding alternative basing modes for the MX missile. On April 6, 1983, Lieutenant General Scowcroft transmitted the Commission's report to the President and made copies available to the

Congress. On April 19, 1983, President Reagan transmitted to the Congress his formal recommendation, including a copy of the required strategic forces technical assessment review prepared by the Department of Defense. (See executive communications). One day later on April 20, 1983, Chairman Hatfield, of the Committee on Appropriations, introduced S. Con. Res. 26 which was referred to the Committee on Appropriations.

The Appropriations Committee held 4 days of hearings to consider S. Con. Res. 26, the resolution of approval for the obligation and expenditure of funds for an MX basing mode. On Tuesday, May 3, 1983, the Committee heard critical testimony from Dr. McGeorge Bundy, Special Assistant to Presidents Kennedy and Ford, and from Adm. Stansfield Turner, former Director of the CIA under President Carter. On Wednesday, May 4, 1983, Lt. Gen. Brent Scowcroft and the Honorable Kenneth W. Dam, Deputy Secretary of State, provided testimony on the Commission's report and arms control issues, respectively. On Thursday, May 5, 1983, the views of the Department of Defense and the Joint Chiefs of Staff were provided by the Honorable Caspar W. Weinberger and General John W. Vessey, Chairman of the Joint Chief of Staff. A final day of hearings were held on Tuesday, May 10, 1983, to hear comments from Senator John Tower, chairman of the Senate Armed Services Committee, and the ranking minority member of that committee, Senator Henry M. Jackson.

IV. REPORT OF THE SCOWCROFT COMMISSION

The President's Commission on Strategic Forces was established to examine the future of our ICBM forces and respond to issues raised by the 97th Congress regarding alternative basing modes for the MX missile. The Commission, consulted with several hundred technical experts in coming to their findings and recommendations which were transmitted to the President on April 6, 1983. In addition to its recommendation for the deployment of 100 MX missiles in existing Minuteman silos, the Commission also made several other recommendations regarding modernization of U.S. strategic forces.

The Committee is mindful that the wording of S. Con. Res. 26 is specified by law and that the scope of formal action is limited to that of a basing mode for the MX missile. The Committee's action on S. Con. Res. 26 should not, therefore, be construed to authorize the obligation of funds for programs, projects, or activities other than funds already appropriated for full-scale engineering development of an MX basing mode and for flight testing of the MX. For information purposes only the broader policy issues which were discussed by the Scowcroft Commission and which were raised during hearings regarding the deployment of the MX missile in existing Minuteman silos are included in this report.

Deterrence and arms control.—The President's Commission on Strategic Forces believes that effective arms control is essential to diminishing the risk of nuclear war and that through a policy of deterrence the United States can successfully avoid nuclear warfare and at the same

time check the threat of aggressive totalitarianism. The Commission continues to state, however, that moral neutrality and indifference or acquiescence in the face of Soviet efforts to expand their military and political power do not hasten such settlements—they delay them, make them less likely, and ultimately increase the risk of war. Moreover, the Commission believes that, because deterrence is the set of beliefs in the minds of Soviet leaders about our own capabilities and will, for deterrence to be effective we must not merely have weapons, we must be able, and prepared, if necessary, to use them effectively against the Soviet power.

Testimony and questions presented before the Committee supported the Commission's belief that a policy of deterrence is essential to effective arms control negotiations, but such statements differed in their opinion as to the actual "deterrent effect" of the MX missile when placed in existing silos. It was argued that other ongoing modernization efforts such as the Pershing II missile and Trident II submarine with D-5 missiles constitute more of a threat to the Soviets and, therefore, hold greater deterrent value than the MX. While it is difficult to discern the impact of the MX missile proposal on current START negotiations, the Departments of State and Defense, under questioning of the Committee, did suggest that the President would consider all current and future strategic forces, including deployment of the MX, in his deliberations on seeking arms control agreement with the Soviets.

U.S. strategic forces and trends.—The Commission reports that development of our triad, or component strategic force—intercontinental ballistic missiles (ICBM's), submarine-launched ballistic missiles (SLBM's), and bombers—is the result of an historical evolution. Not only does the existence of a component strategic force make a Soviet attack difficult on any single element of the triad, the Commission reports, but it severely complicates an all-out attack and enhances the survivability of any one element when it is assessed collectively and not in isolation. As well, each element of the triad brings to our strategic forces unique properties that do not exist in the others.

The Commission also reports that technological trends for strategic forces indicate accuracy of both ICBM and SLBM forces will continue to increase, although ICBM accuracy will continue to remain somewhat better. Because of such accuracy improvements, concepts, and developments in hardening silos will not necessarily postpone vulnerability to attack, however. It is expected that submarines will continue to be sufficiently survivable for a long time.

Witnesses appearing before the Committee concurred with the Commission's findings regarding the importance of the triad concept and agreed that it is the survivability of the triad, not just a single component, that constitutes the foundation of our strategic deterrence. It was noted, however, that because of historical differences in the development of their respective strategic forces, the United States has always relied more heavily than the Soviets on air- and sea-based systems and has, for the most part, lagged behind the Soviets in overall ICBM capability. The question was then raised as to the relative need for the

United States to compete with the Soviets by deploying the MX rather than upgrading the existing Minuteman system and relying on strength through the triad concept.

Non-ICBM recommendations.—To emphasize the importance of the triad concept the Scowcroft Commission makes several recommendations to the President for modernizing our ICBM and other air- and sea-based strategic forces. The Committee recognizes that the President has submitted an ambitious modernization plan for all such components of the strategic forces and notes that Congress is presently considering the President's fiscal year 1984 budget request for these modernization efforts.

ICBM recommendations.—In coming to its final recommendations for modernizing the strategic forces the Commission notes that through changing technology, arms control negotiations, and our own domestic political process, the issue of ICBM modernization has come to be mis-cast in recent years.

In a unique and enlightening preface the Commission seeks to dispell several historical misconceptions about ICBM modernization; that any new ICBM deployment must be survivable even when viewed in isolation; that the imbalance between U.S. and Soviet capabilities should be rectified quickly; that arms control agreements should concentrate on reducing missile launchers rather than warheads; that, aside from survivability, it is cheaper to deploy a given number of warheads in a few large missiles than to deploy the same number of warheads on a larger number of smaller missiles, and; that replicating the desirable characteristics of the existing Minuteman was through a single basing mode.

The Commission concludes that the preferred approach to modernizing our ICBM force is in three components: initiating the design and engineering of a small single warhead ICBM, to reduce target value and enhance long-term survivability by allowing for flexibility in the basing mode; seeking arms control agreements based on single warhead weapons to enhance strategic stability, and; deploying 100 MX missiles in existing silos to satisfy the immediate need to modernize the ICBM force and aid in the transition to a single warhead weapon.

Much of the Committee's questioning focused on the rationale of the Commission's recommendation given its concerns over historical misconceptions about ICBM modernization. Why, for example, did the Commission admit the vulnerability of the ICBM forces, then proceed to recommend deployment of our most sophisticated warhead in existing silos? Having stated that the imbalance between U.S. and Soviet ICBM capabilities need not be rectified quickly, why then did the Commission not decide to forego MX deployment altogether and move directly to design of the Midgetman? Why did the Commission express concern over the budgetary impacts of deploying a number of warheads in a few large missiles, then recommend the eventual obligation of \$16,000,000,000 to \$20,000,000,000 for such a system?

Still others questioned whether deploying the MX missile in existing silos would move the United States from a "retaliatory" doctrine to a first-strike capability doctrine and whether the underlying rationale be-

hind the Commission's recommendation was to provide enhanced quick hard-target kill capability to leave open the option for a launch-on-warning policy. In response, witnesses on behalf of the administration stated that modernization of the current ICBM system was necessary to enhance missile accuracy, expand hard-target kill capability, and lay the groundwork for more realistic arms negotiations with the Soviets.

V. COMPLIANCE WITH PARAGRAPH 7(C) OF RULE XXVI OF THE STANDING RULES OF THE SENATE

Paragraph 7(c) of Rule XXVI of the Standing Rules of the Senate provides that:

Whenever any committee by rollcall vote reports any measure or matter, the report of the committee upon such measure or matter shall include a tabulation of the votes cast by each member of the committee in favor of and in opposition to such manner or matter.

The votes cast on the motion to favorably report S. Con., Res. 26 were as follows:

Voting for (17):

Stevens
McClure
Laxalt (by proxy)
Garn
Cochran (by proxy)
Abdnor
Kasten
D'Amato
Mattingly
Rudman
Specter (by proxy)
Domenici (by proxy)
Stennis
Byrd (by proxy)
Chiles
Johnston
DeConcini

Voting against (11):

Hatfield
Weicker
Andrews
Proxmire
Inouye
Hollings
Eagleton (by proxy)
Burdick
Leahy
Sasser
Bumpers

Voting present (1):

Huddleston

VI. COST AND BUDGETARY CONSIDERATIONS

The Congressional Budget Office has provided the following estimate of out-year impacts of the \$560,000,000 which was appropriated in fiscal year 1983 but not yet obligated or expended for the MX missile basing mode, as well as the \$65,000,000 also prohibited for flight testing of the MX.

CBO COST ESTIMATE

Bill purpose.—This resolution allows \$625,000,000 of previously appropriated budget authority to be obligated and expended. The continuing resolution providing appropriations for fiscal year 1983 (Public Law 97-377) contained \$560,000,000 for full-scale

engineering development of an MX missile basing mode and \$65,000,000 for an initial flight test. The continuing resolution prohibited obligation and expenditure of the basing mode and flight test budget authority until both Houses of Congress approve in a concurrent resolution a basing mode.

ESTIMATED COST TO THE FEDERAL GOVERNMENT

[By fiscal year, in millions of dollars]

	1983	1984	1985	1986	1987	1988
Estimated outlays	50	380	195	0	0	0

The costs of this bill fall within function 050.

Basis-of-estimate.—The estimate assumes that a similar resolution is passed by the House of Representatives in time to permit obligations as early as July 1, 1983. The outlay estimate is based on historical spendout rates for the appropriations account, research, development, test, and evaluation, Air Force.

In addition, the Air Force Office of the Special Assistant for the MX Peacekeeper Missile has prepared the following table outlining the MX program costs from fiscal year 1987 thru fiscal year 1989, based upon the Commission's recommendations.

MX PROGRAM COSTS, BASED UPON COMMISSION RECOMMENDATION

[Then-year dollars, in millions]

Fiscal year	RD&E (3600)	Procurement (3020)	Milcon (3300)	Total	Missile buy
1983	¹ \$2,506	² \$0	\$17	\$2,523	
1984	2,034	2,536	72	4,642	27
1985	1,676	3,476	141	5,293	37
1986	897	3,042	98	4,037	48
1987	410	2,878	78	3,366	48
1988	0	2,130	71	2,201	48
1989	0	661	0	661	15
Total	7,523	14,723	477	22,723	223

¹ Congress appropriated but did not approve the obligation nor expenditure of \$625,000,000 for development of a basing mode and flight testing pending congressional approval.

² Congress did not approve the appropriation of \$988,000,000 requested by the President in fiscal year 1983 for procurement funding.

VII. EXECUTIVE COMMUNICATIONS

The pertinent legislative reports relating to S. Con. Res. 26 received by the Committee setting forth the recommendations of the President, the Department of Defense, and the Congressional Budget Office are enclosed as follows:

THE WHITE HOUSE

WASHINGTON

April 19, 1983

Dear Mr. President:

On January 3, 1983, I established a bipartisan Commission to respond to the issues raised by the Congress regarding the Peacekeeper missile, possible alternatives to the Peacekeeper, and possible alternative ICBM basing modes. The report, which the Commission submitted to me, was delivered to you last week. Attached is a classified report prepared by the Department of Defense submitted pursuant to the provisions of subsection (7) of Title V of the Department of Defense Appropriations Act, 1983, enacted as part of P.L. 97-377. The attached document addresses the issues set out in subsection (7).

I am pleased to report to you that the distinguished group of Americans who served on the Commission have unanimously agreed on a package of actions, which I strongly support, and on which Secretary Weinberger, the Joint Chiefs of Staff, Secretary Shultz and the National Security Council have joined with me in supporting. They are as follows:

- (1) Improve as a first priority the command, control, and communications for our strategic forces; continue with high priority the Trident submarine and D-5 missile programs; and continue the bomber and air-launched cruise missile efforts as planned.
- (2) Proceed with the immediate production of the Peacekeeper missile, and deployment of 100 such missiles in existing Minuteman silos in the Francis E. Warren AFB area, which I propose as the alternative basing plan required by P.L. 97-377. Specifically, the first 50 missiles will replace the Minuteman missiles in the 400th Strategic Missile Squadron (SMS). In turn, the second 50 will replace the Minuteman missiles in the 319th SMS. I have chosen Francis E. Warren AFB because the existing silos at that location offer the best operational considerations.
- (3) Commence engineering design of a small, single warhead ICBM. If strategic and technical considerations warrant, such a missile could be ready for full-scale development in 1987 and potential deployment in the early 1990's.
- (4) Expand research into, and undertake the most rigorous examination of, all forms of defense against ballistic missiles. This includes work on penetration aids.
- (5) Undertake a specific program to resolve uncertainties regarding silo and shelter hardness, a study of fratricide effects, and investigation of different types of land-based vehicles and launchers, particularly hardened vehicles.

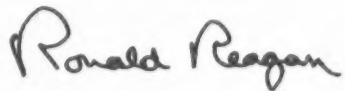
Finally, I reconfirm that I am fully committed to continue to pursue ambitious and objective arms reduction negotiations with a goal of agreements that are balanced, promote stability in time of crisis, constitute meaningful force reductions, and

are verifiable. As you know, our proposals to secure reductions of all types of weapons are before the Soviets in many forums.

I urge the Congress to join me now in this bipartisan effort to settle on a modernization plan for our strategic forces. For more than a decade, each of four administrations has made proposals for arms control and modernization that have become embroiled in political controversy.

Balancing a number of factors, the members of the Commission, the Secretary of Defense, Joint Chiefs of Staff, and I have all had to take fresh looks at our previous positions. Despite the range of views these groups have held in the past, we are presenting to you a unanimous view on this vital issue. Your support for the consensus can unite us in taking a major step forward in our common search for ways to ensure national security.

Sincerely,

A handwritten signature in dark ink, reading "Ronald Reagan". The signature is written in a cursive, slightly stylized script. The first letter "R" is large and loops around the first part of the name. The last name "Reagan" is written in a more straightforward cursive style.

The Honorable George Bush
President of the Senate
Washington, D.C. 20510

STRATEGIC FORCES
TECHNICAL ASSESSMENT REVIEW (U)

EXECUTIVE SUMMARY

31 March 1983

Background on President's Modernization Program

Upon taking office, President Reagan initiated a review of U.S. strategic forces and the need to modernize them. On 2 October 1981, following completion of his review, he announced a strategic forces modernization program to ensure continued freedom of the United States and our allies from coercion or nuclear attack. The President directed the continued development of the Peacekeeper missile (then known as M-X), near-term deployment in existing intercontinental ballistic missile silos, and selection of a permanent basing mode by 1984. Over the next several months, Congress reviewed the President's modernization program and directed that selection of a permanent basing mode be accelerated to December, 1982. As a result, several basing alternatives were studied by the Air Force, with review by numerous panels. A permanent basing mode, closely spaced basing, emerged from these efforts, and on 22 November 1982, the President announced his decision to deploy 100 Peacekeeper missiles in this mode, near F. E. Warren Air Force Base, Wyoming.

In December 1982, Congress, in passing the Continuing Resolution for FY 1983 funding, reviewed the President's decision. Because it had questions on the need for intercontinental ballistic missile modernization as well as the viability of closely spaced basing, Congress subsequently requested submission of a report containing:

- A technical assessment of closely spaced basing.
- A technical assessment of other basing alternatives.
- A technical assessment of intercontinental ballistic missile alternatives.
- A comparative assessment of alternative non-intercontinental ballistic missile strategic programs.
- A reaffirmation of closely spaced basing or a proposed alternative.

The Need for Intercontinental Ballistic Missile Modernization

For over 20 years, the United States has relied on a combination of intercontinental ballistic missiles, strategic bombers, and submarine based missiles--known as the Triad--to deter Soviet aggression. The elements of the Triad complement one another to ensure that, under all conditions, a sufficient strategic force could survive to retaliate after a potential Soviet attack. Attributes which intercontinental ballistic missiles bring to the Triad include accuracy and responsiveness; real-time communications with command authorities; short time-to-target; alert rates approaching 100%; and basing on U.S. soil. Historically, they have also been relatively invulnerable to Soviet attack.

Since the late 1960s, the Soviet Union has engaged in a massive strategic arms buildup that is creating a widening asymmetry between U.S. and Soviet forces, threatens

our retaliatory capability, and is reducing the deterrent value of the Triad. They have deployed many thousands of increasingly accurate and powerful warheads on almost 1400 intercontinental ballistic missiles. This force provides the Soviets a capability to destroy most of our current intercontinental ballistic missile force using less than one-fourth of their present intercontinental ballistic missile inventory if the U.S. chose to ride out the entire attack.

The Soviets also have taken steps to reduce our ability to retaliate effectively against their strategic forces. They have reinforced the structures protecting their intercontinental ballistic missiles and much of their command and control network to the point where our most capable intercontinental ballistic missiles now have only limited ability to destroy them in a retaliatory strike. This imbalance in strategic capability -- the Soviets can threaten our intercontinental ballistic missiles while we have limited capability against theirs -- seriously undermines the strength of our nuclear deterrent. To redress this problem, the United States should:

- Deploy sufficient numbers of a new intercontinental ballistic missile with improved accuracy to neutralize the coercive advantage the Soviets now hold over our intercontinental ballistic missiles.
- Ensure basing sufficiently survivable to allow adequate decision time for credible, effective, timely retaliation, while retaining as many as possible of the unique characteristics provided by intercontinental ballistic missiles.
- Incorporate an inherent growth potential for the selected intercontinental ballistic missile modernization approach to counter Soviet responsive actions.
- Initiate deployment as quickly as possible to meet these military requirements and demonstrate our national resolve to maintain a stable strategic balance.

Intercontinental Ballistic Missile Modernization Alternatives

Modernizing the intercontinental ballistic missile portion of the Triad involves the development of a new missile and a basing system. In this review, four missile alternatives and nine methods of basing the missile were considered. The missile alternatives were Peacekeeper, common missile, improved Minuteman III, and small missile. Basing alternatives included closely spaced basing, closely spaced basing with concealment, widely spaced basing, south side basing, multiple protective shelters, road mobile, hard road mobile, deep basing, and existing Minuteman silos. Additionally, the ability of the Trident II to accomplish the ICBM mission was analyzed. The various missile and basing alternatives are described below.

MISSILES

- **Peacekeeper.** A 195,000 pound missile that has completed initial development and is ready for flight testing.
- **Common Missile.** A variant of the Navy Trident II (D-5), which could be expected to be ready for flight testing in 1987.
- **Minuteman III.** An improved version of the fully developed and fielded solid propellant missile, which is the current mainstay of the land-based intercontinental ballistic missile force.
- **Small Missile.** A lightweight two or three stage solid propellant intercontinental ballistic missile which is currently in advanced technology development.

BASING

- **Closely Spaced Basing:** Missiles deployed in vertical superhardened silos spaced approximately 2000 feet apart.
- **Closely Spaced Basing With Concealments:** Missiles deployed as in closely spaced basing with more silos than missiles. The missile location is concealed through system design and operational procedures.
- **Widely Spaced Basing:** Missiles deployed in vertical superhardened silos spaced a few miles apart.
- **South Side Basing:** Missiles deployed in superhardened silos on the south side of mesas.
- **Multiple Protective Shelters:** Missiles deployed in horizontal shelters of relatively low hardness spaced approximately one mile apart, with more shelters than missiles.
- **Road Mobile - Soft:** Missiles deployed on mobile launchers which travel continuously on public roads.
- **Road Mobile - Hard:** Missiles deployed on hardened transporters which are deployed on military reservations with dash on warning capability.
- **Deep Basing:** Missiles deployed deep underground.
- **Existing Minuteman Silos:** Missiles deployed in existing Minuteman silos.

Missile Assessment

A detailed technical assessment of the four intercontinental ballistic missile alternatives was conducted, focusing on the areas of military capability, hardness, transportability, schedule, and development status. The results are summarized below.

The Peacekeeper missile rates outstanding in all categories except transportability. The size and weight of the missile and transporter are not compatible with existing public highways. Therefore, Peacekeeper transportability is marginal. It is noted, though, that special roads could be constructed so that Peacekeeper could be moved in a concealment mode. The other factors are rated outstanding based on the status of the development program and the hardness requirements incorporated into the missile hardware. The advanced inertial reference sphere guidance system provides high accuracy, and, with the Mark 21 warhead, excellent hard target capability. The footprint (target coverage) of the missile is large. Its high throw weight provides the flexibility to incorporate alternative payloads to respond to potential Soviet developments such as superhardening. The missile was designed to withstand loads and nuclear effects well beyond the capability of current intercontinental ballistic missiles. Peacekeeper is ready for flight test and can be ready for deployment in 1986.

The common missile was defined in the 1978 Air Force/Navy commonality study. The intent was to reduce costs by developing and building one missile to meet the needs of both services. No significant cost savings were identified, therefore no further common missile definition has occurred. Initiating a program today would not permit deployment of a new land-based missile until 1990 at the earliest. If it were configured for land and sea deployment, the common missile would have intercontinental ballistic missile deficiencies. Its military capability would be less than Peacekeeper since it would use a

stellar-inertial guidance system which is less accurate at intercontinental ballistic missile ranges than the Peacekeeper advanced inertial reference sphere system. It would be possible to incorporate an advanced inertial reference sphere guidance system, achieving accuracy equivalent to Peacekeeper, but this would impose at least an additional one year delay in initial operational capability. The throw weight would be 40% lower than for Peacekeeper leading to reduced payload flexibility, and footprint capability. The hardness of the common missile, as defined in the 1970s, would be less than Peacekeeper. Although it would be smaller than Peacekeeper, the common missile would still require a special transport vehicle that would not be compatible with existing public highways.

Improved Minuteman III would incorporate the advanced inertial reference sphere guidance system, achieving accuracy equivalent to Peacekeeper. However, its military capability would still be less than Peacekeeper because of throw weight and footprint limits. The missile would have limited flexibility to incorporate alternative payloads. Its hardness would be limited by the current missile structure, and is much less than Peacekeeper's. Incorporating missile modifications would require design, development, and test programs so that 1988 would be the earliest possible initial operational capability. The missile is currently transported over the public highway system in areas where it is deployed. Although it is feasible to transport the entire missile, the system is designed for alert and launch from a vertical position. Therefore, significant modifications would be required for use in a mobile deployment.

The small missile could be available in 1990 at the earliest, because it is currently only in concept development; that is, studies are under way but no component or subsystem development has been initiated. The military capability of the small missile is dependent on the guidance system used. In a silo basing mode advanced inertial reference sphere could be used, giving accuracy comparable to Peacekeeper. In a mobile basing mode, with a stellar inertial guidance system used, the accuracy would be less. It may be possible to incorporate an advanced inertial reference sphere system, giving high accuracy, in a mobile deployment. This would impose at least a two to three year delay in initial operational capability. The missile has very limited payload flexibility because of its low throw weight. The small missile could have a hardness equivalent to Peacekeeper. It is small enough to be transported by truck over the existing public highway network.

System Alternatives

Detailed technical assessments of the basing alternatives were accomplished by considering the applicability of the four missile alternatives to each of the basing alternatives. Systems were sized to achieve a normalized capability of 1000 warheads. The one exception was multiple protective shelters, which was sized according to the baseline system of the 1979-1981 period (200 missiles). Based on the results of the missile assessment, Peacekeeper was used as the baseline missile for all alternatives where its deployment is practical. Due to Peacekeeper's size and weight, large vehicles which are not compatible with existing public highways are required for movement, therefore, Peacekeeper was not considered in the mobile alternatives; the small missile is used as the baseline for these alternatives. Additionally, the small missile and improved

Minuteman were selected as alternative baseline missiles for closely spaced basing and Minuteman silos, respectively. All other missile/basing combinations which were deemed feasible were considered as excursions. Baseline systems and excursions are shown in Table 1.

Table 1. Baseline System Alternatives

Basing Mode	Missile (Number of Missiles/Number of Silos or Shelters)			
	Peacekeeper	Common	Improved Minuteman III	Small
Closely Spaced	100/100	170/170*	350/350*	1000/1000
Closely Spaced With Concealment	100/300	170/300*	350/1050*	—
Widely Spaced	100/100	170/170*	350/350*	—
South Side	100/100	170/170*	350/350*	—
Multiple Protective Shelters	200/4600	—	—	—
Road Mobile - Soft	—	—	350/350*	1000
Road Mobile - Hard	—	—	350/350*	1000
Deep Basing	100	—	—	1000*
Existing Minuteman Silos	100/100	170/170*	350/350	—
*Excursions from baseline alternatives				

Basing Assessment/Evaluation

The technical assessment and evaluation were conducted for each baseline system alternative as well as the missile excursions. The technical assessments addressed how the systems derive survivability; likely Soviet approaches for attacking the system; siting, environment, and public interests; the ability of the systems to respond to Soviet threat growth; technical issues/risk due to the status of the technology required by the basing mode; and arms control and foreign policy issues.

The evaluation, which incorporated the results of the technical assessments, involved criteria in three areas: strategic capability, system feasibility, and policy considerations.

Strategic Capability

- **Deterrence.** The ability to discourage coercion or nuclear attack on the United States or its allies. Deterrence is measured from the point of view of the adversary; therefore, the assessment is from a Soviet view of our military capability. Subfactors of deterrence are: U.S. launchable weapons, Soviet attack durations, Soviet attack requirements, Soviet attack confidence, U.S. military capability, including prompt hard target capability and U.S. survivability.

- **Military Capability.** The capability to place Soviet hard targets at risk and be promptly launched to meet military objectives. The assessment is from a United States view of capability. Subfactors include: Soviet hard targets at risk, and U.S. promptness, command, control, and communications survivability, retargeting capability, alert weapons, and launch opportunities from a U.S. view.
- **Survivability.** Measure of the system capability to survive an attack from the U.S. view.
- **Endurance.** Measure of the system to maintain a launch capability for a protracted period in a post-attack environment for those surviving assets.
- **Resiliency.** An assessment of the system capability to counter responsive threats. Three subfactors are: survivability against long term responsive threats, Soviet threat stress, and U.S. growth options.
- **Defendability.** An assessment of the adaptability of ballistic missile defense, to counter threat changes and/or growth. The assessment includes both potential effectiveness and deployment implications including system size, technology requirements and impact. Subfactors include: defense system contribution to deterrence, military capability, survivability, endurance, resiliency, feasibility, and arms control.

System Feasibility

- **Cost.** Weapon system costs (including development, production and military construction), operations and support costs, and the total life cycle cost (10 year). All alternatives have been costed on a consistent basis with the best available system definition and cost data. The relative confidence in the cost estimates varies with the maturity of the system definition.
- **Schedule.** An assessment of the year of initial operational capability (10 fielded missiles), and the year of full operational capability. Two subfactors: initial operational capability schedule and full operational capability schedule are included.
- **Technical Risk.** An assessment of the system in terms of the technical risk involved in development, production, deployment, and operation.
- **Operability/Supportability.** An assessment of the system requirements in terms of four subfactors: operability, maintainability, security, and logistics.
- **Siting.** An assessment of siting opportunities in terms of the number of geographical areas that meet system requirements and a measure of flexibility of accommodating presently unforeseen constraints. Siting technical feasibility considerations are included.
- **Environmental.** An assessment of the environmental impact of a system ranging from socioeconomic to resource impact. Six subfactors used in this assessment are: socioeconomic, biology, air quality, water resources, land use, and cultural resources.
- **Public Interface.** A measure of the frequency of travel/movement on public roads of the nuclear warhead and/or missile during system operation.

Policy Considerations

- **Arms Control.** An assessment of the compliance of the system with provisions of existing strategic arms agreements (as consistent with the interim no-undercut policy) and support for U.S. objectives in future strategic arms agreements. The interim no-undercut policy, which is neither permanent nor legally binding, generally implies restraint from actions that would represent irreversible acts with respect to provisions of existing agreements. Subfactors to assess compatibility with existing agreements are: relocation or construction of additional fixed intercontinental ballistic missile launchers, and launcher modernization constraints. An assessment of

an alternative's support for U.S. START objectives of militarily-significant reductions, adequate verification and leverage for successful negotiations. Six subfactors are used: system availability (leverage is highly dependent on the availability of the system; a system with a later availability provides less leverage in the current START negotiations than a system with a nearer term initial operational capability), maintenance of an active missile production capability, force effectiveness (capability to meet mission requirements with reduced forces), near-term demonstration of a U.S. modernization program, credible prompt offensive capability that diminishes Soviet utility of large intercontinental ballistic missile forces (Soviet incentive to negotiate reductions of large intercontinental ballistic missiles), and effective verification.

- **Foreign Policy.** The impact of the alternative on perceptions of the United States foreign policy in two areas: deterrent credibility and support for NATO modernization. Perception of support for NATO nuclear force modernization is likely to be heavily influenced by the availability of the system. A near-term deployment has greater influence on allied support of NATO nuclear force modernization than systems with later availability. Subfactors are near-term demonstration of U.S. resolve and will to modernize, perception of U.S. capability to counter the threat created by massive Soviet deployments, contribution to flexible response capability, and commitment to sovereign basing.

Evaluation Results

The results of the evaluation for the baseline alternatives are summarized below. It is noted here that the ratings are based on a desired 1986 initial operational capability. The Trident II program, although it could not be evaluated on the same basis as the intercontinental ballistic missile alternatives, is also discussed below.

Closely Spaced Basing

A deployment of 100 Peacekeeper missiles in closely spaced basing would enhance deterrence by significantly improving United States military capability. Additionally, its destruction by the Soviets would be difficult and uncertain. A significant force would survive the first Soviet attack wave and be available for prompt retaliation. A highly-coordinated multi-wave Soviet attack would be required to negate a closely spaced basing deployment. Such an attack would exhaust the SS-18 inventory. The system can endure for a fairly long period of time by going into a powerdown mode. A number of potential sites have been identified, with F. E. Warren AFB, Wyoming the preferred deployment area. The small land area required leads to low environmental impacts. Since the entire deployment area would be fenced by this concept, public exposure to the system would be minimized. Leverage against advanced threats could be achieved by using one of the growth options such as countermeasures, concealment, or ballistic missile defense. The use of a growth option with closely spaced basing would raise the Soviet attack price to such a level that the post-attack strategic balance could not be viewed favorably by the Soviets during the 1990s. The system would be compatible with SALT I and/or II if either were in effect at the time of deployment, is verifiable, provides negotiating leverage, and supports the U.S. objective of significant reductions. This deployment would demonstrate U.S. resolve to modernize our intercontinental ballistic missiles and would encourage support of NATO nuclear force modernization. The silo hardness definition requires some additional verification testing but based on the DNA Silo Test Program, this appears to have low technical risk. The system could be available in 1986 at a cost of \$26.4 billion to deploy and an additional \$293 million per year for operations and support.

Closely Spaced Basing With Concealment

Closely spaced basing with concealment (100 missiles in 300 silos) preserves the positive aspects of closely spaced basing and provides even greater deterrence capability because of even greater effectiveness against Soviet threats. However, there is slightly greater technical risk because of the need to preserve location uncertainty. A larger land area will be required, which reduces siting flexibility, increases environmental impacts, and reduces the ability for treaty compatible defense, although, due to increased leverage, defendability overall is outstanding. Endurance, operability, schedule, and resiliency are equivalent to closely spaced basing. Public exposure would increase because of the need to move the missile from an area support center to an unadjacent array. As with closely spaced basing, the system would be compatible with SALT I and/or SALT II if either were in effect at the time of deployment, provides leverage for successful negotiations and supports arms reductions. It could be effectively verified through national technical means and additional cooperative measures. The system would cost \$36.8 billion to deploy and an additional \$400 million per year for operations and support.

Closely Spaced Basing - Small Missile

Closely spaced basing with 1000 small missiles would have outstanding survivability and deterrence capability since it preserves the characteristics of closely spaced basing with a large increase in the number of silos the Soviets would need to target. However, it could not be available until after 1990 because of the small missile development status. The advanced inertial reference sphere guidance system would lead to hard target kill capability equivalent to Peacekeeper. The increased system size reduces siting opportunities, and increases environmental impacts, public exposure to the system, and operability concerns. Endurance, resiliency, and foreign policy are the same as for closely spaced basing with Peacekeeper. The later initial operational capability gives less negotiating leverage than other earlier initial operational capability basing modes. In addition, its deployment would require the United States to reevaluate its proposed START missile ceiling. The system would cost \$69.7 billion to deploy and an additional \$650 million per year for operations and support.

Widely Spaced Basing

Widely spaced basing would provide fair deterrence capability. The major shortcoming of this system is its low effectiveness against projected and responsive Soviet threats. It would also be deployed over a large land area, increasing the land acquisition burden and related difficulties, and reducing siting flexibility. This would also make ballistic missile defense more difficult and complicate operability. The system, which could be available in 1986 depending on land acquisition, would, like closely spaced basing, generally support arms control and foreign policy objectives. Technical risk would be identical to closely spaced basing. Public exposure, though slightly higher than closely spaced basing, would be low. Resiliency would be reduced, with ballistic missile defense and backfill (construction of new silos between widely spaced silos) to closely spaced basing possible. The system would cost about the same as closely spaced basing, with \$28.9 billion required for deployment and \$300 million per year for operations and support.

South Side Basing

South side basing can make a contribution to the United States posture against current threats. However, against projected and responsive threats, the effectiveness of this system decreases. Unlike widely spaced basing, suitable sites for south side deployment are extremely limited. Siting constraints make ballistic missile defense much more difficult, and with the limited siting opportunities, expansion becomes a problem. This reduces system resiliency. The system could be available in 1988. Technical risk is low and relates to superhardening and constructibility. The remote locations of potential sites leads to high environmental impacts. Arms control and foreign policy for this alternative are generally the same as for the other alternatives discussed above. However, the somewhat later initial operational capability could result in less negotiating leverage. The system would cost \$27.6 billion to deploy and \$300 million per year for operations and support.

Multiple Protective Shelters

The military capability of Peacekeeper in multiple protective shelters is outstanding based on the deployment of 200 missiles. The baseline concept of 200 missiles and 4600 shelters is effective against the number of warheads in the current Soviet arsenal. This effectiveness could be maintained against a constrained threat. However, in the absence of constraints on total number of reentry vehicles, the projected threat could overwhelm the multiple protective shelter system without an expansion in the number of shelters. In the face of an unconstrained threat, the system's survivability is low. However, the outstanding military capability would contribute to deterrence. A major drawback to multiple protective shelters is the large deployment area and construction requirements, which leads to substantial environmental impacts. This also limits system expansion, leading to a lower resiliency rating. Siting is fair, based on the identification of a limited number of suitable areas, and defendability is good since an effective non-treaty compatible defense is possible. There is technical risk associated with preservation of location uncertainty. System size and concealment requirements lead to significant operability concerns. Foreign policy and endurance are the same as for the superhardened alternatives. Multiple protective shelter would be compatible with SALT I and/or SALT II, if either were in effect at the time of deployment, is verifiable through national technical means, provides negotiating leverage, and is compatible with the U.S. goal of reduced forces. The system would cost \$49.4 billion for deployment and \$770 million per year for operations and support. System initial operational capability could be achieved in 1988.

Road Mobile - Soft

A continuously road mobile system has very high survivability. Its military capability is not as good as most other alternatives since it has limited hard target kill capability (reduced accuracy). Increased accuracy may be possible with a two to three year delay in initial operational capability. The survivability with reduced military capability combine to still contribute to deterrence value. This road mobile system relinquishes the protection offered by a secure area on a military reservation for major exposure to the public. It is manpower-intensive. Significant cost penalties are incurred: operations in nonsecure areas and operations over large areas necessitate 20 to 30 maintenance and

security locations with associated command, control, and communication connectivity. Technical risk would be determined primarily by a new, highly reliable transporter which would have to be developed. The system depends on development of a new small missile and therefore cannot be deployed until 1990. Public interface considerations could be a negative influence on meeting the IOC. System endurance following attack would be lower than the fixed alternatives since it would depend on resupply and personnel availability. Arms control and foreign policy impacts are generally the same as for the alternatives discussed above. However, verification would require additional cooperative measures and the proposed START ballistic missile ceiling would have to be reexamined. The decreased accuracy and system availability would reduce negotiating leverage. The later initial operational capability also would lessen influence on NATO nuclear force modernization. The system would cost \$38.2 billion to deploy and almost \$3 billion per year for operations and support. Defendability is not applicable to this system.

Road Mobile - Hard

Deployment of the small missile in hardened vehicles on military installations with dash-on-warning capability would provide high survivability with sufficient warning. Like the road mobile alternative discussed above, the system would have limited hard target capability, unless initial operational capability is delayed until the mid-1990s. Endurance and schedule for this system would also be the same as for the public highway mobile system. Defense of the system would be possible because of the smaller area. However, since the defense system would probably not be compatible with the Anti-Ballistic Missile Treaty, defendability is rated fair. Technical risk would be somewhat higher than the other mobile options, since the transporter must be harder than any vehicle previously built, achieve fairly high speeds for a vehicle of its weight, and be very reliable. The need for adequate warning to achieve the survivability is a significant factor in system operation. Operability is better than for the public highway alternative because of the smaller operating area, but the large number of vehicles and missiles is still a maintenance concern. Public interface is reduced since the system would be restricted to military installations during normal operations. However, the restriction to military installations reduces siting opportunities and the need to construct new roads increases environmental impacts. Arms control and foreign policy objectives are the same as for the above mobile options. Verification would require additional cooperative measures, and deployment would demonstrate resolve to modernize. However, decreased accuracy and system availability would reduce negotiating leverage. The later initial operational capability of the system also would lessen its influence on NATO nuclear force modernization. The system would cost \$45.7 billion to deploy and over \$2.3 billion per year for operations and support.

Deep Basing

Deep basing has outstanding survivability against projected threats, very long endurance since it is self contained, and resilience to responsive threats. Due to the inability of the attacker to determine with confidence the probable survivability levels of a deep-based site and to monitor the progress and success of an attack, he has a low level of confidence in ensuring system kill. Its lack of prompt response reduces military capability, but the outstanding survivability leads to a good contribution to deterrence. Deep basing cannot be available until the 1990s, which will lessen the perception in NATO

countries of the United States' resolve to modernize, and would entail greater technical risk than most of the other alternatives, predominantly in the missile egress area. This risk may, however, be resolved as the design matures. A limited number of sites are candidates for deployment and environmental impacts would be high during the construction period. Operability would be fair. New verification techniques may be required, leading to a slightly lower arms control rating. The system supports foreign policy objectives. It would cost \$60 billion for deployment and \$420 million per year for operations and support. Defendability is not applicable for this system.

Existing Minuteman Silos - Peacekeeper

The deployment of 100 Peacekeeper missiles in existing Minuteman silos provides the United States with a substantial improvement in prompt hard-target-kill capability. This alternative allows near-term availability (1986) and has minimal environmental impact, since the sites already exist. It complies with the Strategic Arms Limitation Treaties, is verifiable, and would demonstrate resolve for intercontinental ballistic missile modernization. The system survivability is lower than other alternatives when viewed in isolation from other elements of the Triad. However, the increased military capability still contributes to deterrence. The system endurance, as a result of the low survivability, would be less than for the other fixed Peacekeeper alternatives. Technical risk would be low, as would public exposure. There would be some increased operability requirements beyond that of the current Minuteman force. Defense is possible with a non-treaty compatible system. Resiliency is poor, with the addition of defense the only option. Arms control and foreign policy are outstanding because the system would provide negotiating leverage and demonstrate U.S. resolve to modernize. It would be consistent with SALT I and/or SALT II if either were in effect at the time of deployment, and is verifiable by existing means. Deployment would cost \$16.6 billion with a minimal increase in current Minuteman operations and support costs.

Minuteman Silo - Improved Minuteman

This alternative possesses many of the same attributes as Peacekeeper in Minuteman. Its initial cost is lower, but it would not be available until 1988. Although it generally supports arms control and foreign policy objectives, since it is not a new system, and is not as substantial an addition to our strategic forces, it provides only limited negotiating leverage and shows much less resolve to modernize our forces. System endurance would be lower than for Peacekeeper in Minuteman silos since this alternative does not have a powerdown mode. The system would cost \$9.3 billion to deploy with no increase in operations and support costs over current Minuteman. However, while this alternative may have a low initial acquisition cost, it would require prolonging the life of our aging Minuteman force. This may lead to frequent subsystem refurbishment requirements and subsequently higher cost.

Trident II

Substituting the Trident II for intercontinental ballistic missile modernization would require that the United States forego an early capability for prompt hard target retaliation. This alternative also would require that an increased portion of the strategic workload be accomplished by the sea-based and air-breathing forces, would allow Soviet

concentration on both offense and defense against these two elements, and would reduce our hedge against degradation or failure of the remaining strategic force elements. The earliest initial operational capability for Trident II is late 1989. This date cannot be accelerated. Under the current or even accelerated SSBN procurement program, it would be 1993 before Trident II could actually assume the hard-target single integrated operational plan role that the Peacekeeper can provide in the 1980s.

Intercontinental Ballistic Missile Modernization and Triad Effectiveness

The results of this technical assessment and evaluation were based on evaluating alternatives for modernization of the intercontinental ballistic missile force in isolation. However, as previously mentioned, intercontinental ballistic missiles represent only one element of our strategic forces. Future intercontinental ballistic missile deployments must be viewed in terms of how they combine with our other current and planned strategic forces to complicate Soviet attack planning, reduce Soviet confidence in overall attack success, and stress Soviet technological developments.

How well a new intercontinental ballistic missile deployment combines with the existing Triad could be assessed through its contribution to total Triad effectiveness. The Minuteman silo alternatives would increase Triad military capability. However, they would be susceptible to the same Soviet threats as the existing Minuteman force. No new targets would be added, and the existing targets would be no harder for the Soviets to attack.

The alternatives which involve superhardened silos, closely spaced basing, closely spaced basing with concealment, widely spaced basing, and south side basing would increase Triad effectiveness. In addition to increasing Triad military capability, they would require Soviet force structure changes in order for them to have any realistic attack capability. The small MIRVed warheads which the Soviets have been deploying would be ineffective against these alternatives. The Soviets would have to reverse fractionate their force: i.e., move towards fewer, larger yield warheads. Closely spaced basing imposes a further requirement: development of time-on-target control and/or totally new threats. The attack requirements for closely spaced basing would be such that the Soviets would find it difficult to attack it, our Minuteman force, and our bomber force at the same time.

Deep basing would increase Triad effectiveness since it could not be attacked by any foreseeable Soviet threat. However, the lack of prompt response in this system would lead to a smaller contribution to Triad military capability. Multiple protective shelters would lead to a substantial increase in Triad military capability. A shortcoming is that the soft multiple protective shelters are vulnerable to the same threats as our current Minuteman force. The large number of multiple protective shelters would stress the Soviet's ability to target both the multiple protective shelters and Minuteman forces.

The mobile alternatives would provide a totally new element for Soviet attack planning to face. Their planning would entail the additional requirement of finding the target. Because the missiles would be dispersed over a large area, the Soviets would have

to detonate a large number of weapons in a barrage attack to have high confidence of destroying the targets. The use of a hardened vehicle and incorporation of a dash capability would further complicate Soviet attack planning.

Providing a ballistic missile defense of any of these alternatives would raise the attacker's uncertainty in the outcome of the attack and increase the attack price, or alternatively increase the number of surviving intercontinental ballistic missiles. The effectiveness of the defense depends to a great measure on the basing mode of the defended missiles. A ballistic missile defense configured to comply with the anti-ballistic missile treaty constraints on numbers of launchers, radars, and interceptors would be effective in defense of the closely spaced basing alternatives, but would have limited utility defending other basing options.

Expanding the Trident II program would contribute survivability and hard target capability, but would constitute a major step away from a Triad. It would forego those unique and essential ICBM characteristics which provide the broad diversity needed for strategic deterrence.

Selection of an ICBM Modernization Approach

The results of the review of intercontinental ballistic missile modernization alternatives discussed above, indicate that only one missile, Peacekeeper, can meet the 1986 initial operational capability. Further, this date can only be achieved for Peacekeeper in closely spaced basing, closely spaced basing with concealment, widely spaced basing, or Minuteman silos. However, this should not be construed to mean that the other alternatives do not have merit.

A key objective in selecting a path for intercontinental ballistic missile modernization is that our intercontinental ballistic missile force be resilient. That is, we must select an approach which will contribute to strategic force effectiveness into the 21st Century. Resiliency was evaluated for all system alternatives, indicating that some systems can, by themselves, remain effective against Soviet reactive development through the addition of growth options. An alternative approach would be to deploy more than one intercontinental ballistic missile system: for example, one which meets near-term objectives, and another in the 1990s which will meet longer term objectives.

In other words, we must strive for flexibility in our intercontinental ballistic missile force. Mid- and far-term planning should provide several options since potential outcomes are not easily projected. Having a mix of alternatives available would also improve our arms control/reduction negotiating leverage. The simple fact that we have a range of options, responsive to whatever path the Soviets pursue, could eliminate the need for new deployments and could even lead to bilateral arms reductions pursuant to future negotiations.

Conclusions

An urgent need exists to modernize the U.S. intercontinental ballistic missile force. Over the past 20 years many deployment alternatives have been examined with the intent

of finding one which could ensure a survivable and militarily effective intercontinental ballistic missile force while preserving the many unique capabilities which intercontinental ballistic missiles provide to the U.S. strategic posture. This review of the most viable ICBM modernization alternatives suggests the following:

- Soviet intercontinental ballistic missile accuracy and capability improvements have been predicted since the early 1970s and have now come true sooner than expected.
- Current Soviet intercontinental ballistic missile capabilities have created dangerous and exploitable strategic nuclear force-on-force asymmetries. The United States must correct this problem as quickly as possible.
- To demonstrate national resolve and insure a strong U.S. START negotiating position, the United States needs to make a positive decision now on intercontinental ballistic missile modernization. That decision should include a modernization alternative which can begin to correct current U.S. force deficiencies at the earliest possible date.
- There are technically viable intercontinental ballistic missile deployment and technology program alternatives which, if implemented, could: redress the current imbalance in United States-Soviet strategic force capabilities; significantly enhance the United States ability to deter Soviet actions; add leverage and impetus to the U.S. START negotiating position; and provide for inherent growth potential to cope with a possible increase in the Soviet threat. The earliest possible initial operational capability for intercontinental ballistic missile modernization alternatives is 1986.
- There may not be a single basing alternative which simultaneously can enhance ICBM survivability and preserve the unique deterrent characteristics of intercontinental ballistic missiles—all within the constraints of cost, technical viability, arms control, and environmental compatibility. Consequently, a combination of deployment and technology program alternatives may represent the best approach for modernizing the U.S. intercontinental ballistic missile force.
- Based on this review, four intercontinental ballistic missile modernization program alternatives have been structured as depicted in Figure 1. Each consists of near-term deployment, technology development, and potential follow-on deployments.

Alternative	Near-Term Deployment	Technology Development Program	Potential Follow-On Deployment
A	Peacekeeper in Minuteman silos	• Superhard silos • Small missile • Hard road mobile • Deep basing • Ballistic missile defense	• Peacekeeper in -Superhard silos -Deep basing • Small missile continuation • Ballistic missile defense
B	Improved Minuteman in Minuteman silos	• All of those above • Peacekeeper missile development and test	• Peacekeeper in -Superhard silos -Deep basing • Small missile continuation • Ballistic missile defense
C	Peacekeeper in new hard silos (wide spacing)	• Small missile • Hard road mobile • Deep basing • Ballistic missile defense	• Peacekeeper - Backfill to close spacing - Deep basing • Small missile continuation • Ballistic missile defense
D	Peacekeeper in new hard silos (close spacing)	Same as C	• Peacekeeper -Deep basing • Small missile continuation • Ballistic missile defense

Figure 1. Intercontinental Ballistic Missile Modernization Program Alternatives

All alternatives would provide a near-term increase in prompt hard target kill capability. Alternatives A, C, and D, demonstrate resolve to modernize and provide increased negotiating leverage. Alternatives C and D impose an increased cost to the Soviets, as they would be forced to reverse-fractionate to threaten the systems. Alternative D has the added advantage of very high resiliency, and would force the Soviets to develop new attack strategies and advanced threats. Alternative B has the advantage of lowest initial cost but the disadvantage of weaker demonstration of resolve and reduced negotiating leverage. It does not require the Soviets to develop new threats and has low resiliency, which is also true for alternative A. Further, improving Minuteman would require prolonged life for our aging Minuteman force and provide limited payload flexibility to respond to Soviet superhardening. Alternatives C and D require near-term superhardening technology validation, and alternative C has low effectiveness against projected and responsive Soviet threats.

The technology development programs for all alternatives would complicate Soviet planning and provide flexibility to respond to any future Soviet developments.

MODERNIZING U.S. STRATEGIC OFFENSIVE FORCES:
THE ADMINISTRATION'S PROGRAM AND ALTERNATIVES

Summary of a CBO Study

The Congress of the United States
Congressional Budget Office

PREFACE

Over the next several months, the Congress will be debating the Administration's plan for upgrading U.S. strategic forces, particularly land-based missiles. At the request of the House Budget Committee, the Congressional Budget Office (CBO) is preparing a study of the Administration's strategic plan and alternatives to it. This document summarizes the results of the full study. It is being made available separately in order to be useful at the beginning of the debate; the full study will be available in a few weeks. In accordance with CBO's mandate to provide objective and impartial analysis, this summary contains no recommendations.

By many commonly used measures, the Administration's strategic plan will result in a substantial buildup of U.S. strategic forces. It also represents a decision to maintain a triad of forces each able to survive a Soviet first strike, thereby retaining the insurance inherent in such a combination of forces.

The scope and cost of the Administration's strategic buildup have prompted debate over alternative approaches. This summary outlines three alternatives. One would forgo deployment of the 100 MX missiles in existing silos. Another would forgo deployment of the MX and development of a follow-on land-based missile; instead, it would expand the number of Trident submarines to replace the warheads lost by not deploying more land-based missiles. The study also discusses an alternative that would rely on upgrades of existing B-52 bombers and more air-launched cruise missiles instead of continued procurement of the B-1B bomber.

Lawrence J. Cavaiola and Bonita J. Dombey of CBO's National Security and International Affairs Division prepared this summary under the general supervision of Robert F. Hale and John J. Hamre. Bill Myers of CBO's Budget Analysis Division provided detailed cost analysis. Rich Davison, formerly of CBO, participated in earlier stages of the analysis. Valuable assistance was also provided by Julie Carr, Roberta Drews, T. Keith Glennan III, and Greg Schulte. Thomas A. Brown of the Rand Corporation provided helpful comments. (The assistance of external reviewers implies no responsibility for the final product, which rests solely with CBO.) Robert L. Faherty and Francis Pierce edited this summary.

Alice M. Rivlin
Director

May 1983

SUMMARY

In October 1981, the Administration announced its plan to modernize all parts of the U.S. strategic deterrent. Representing the most comprehensive and far-reaching such effort in the past 20 years, the plan would expand and upgrade the triad of strategic "offensive" forces: land-based and sea-based intercontinental ballistic missiles plus long-range bombers. It would also improve the triad's communications and control systems, and strengthen U.S. defenses against attack by Soviet bombers.

U.S. strategic forces are primarily intended to deter the Soviet Union from initiating a nuclear war. To do so, they must be able to survive a Soviet nuclear strike and retaliate in an appropriate and timely manner. In recent years, the Soviets have expanded and improved their strategic forces. The Administration apparently believes that in response the United States must increase not only the numbers of its forces and their chance of surviving a Soviet strike, but also their destructive capability, endurance, and responsiveness. The broad scope of the buildup—and the relative share of the nation's resources to be devoted to defense in general—has sparked debate, as has the high cost of individual weapons systems. Most recently, debate has centered on the Administration's proposal to deploy the MX missile.

This study assesses the scope and costs of the Administration's planned modernization, taking into consideration the effects that arms control agreements could have on it. The study also considers proposals to modify the Administration's program by (1) dropping the MX missile, (2) focusing modernization efforts on submarine-based missiles rather than land-based missiles, or (3) terminating the B-1B bomber program in favor of improving existing bomber capability.

THE ADMINISTRATION'S MODERNIZATION PLAN

Scope of the Effort

The Administration's plan would involve all three of the triad forces. While not all of the details are available on an unclassified basis, this study assumes that modernization would include the following programs:

- o Deployment by 1988 of 100 MX intercontinental ballistic missiles (ICBMs) in silos formerly housing Minuteman missiles;
- o Deployment in the early 1990s of a new, single-warhead, small ICBM (SICBM) in one or more basing modes;
- o Deployment by the late 1980s of 100 B-1B bombers and in the early 1990s of 132 Advanced Technology—or "stealth"—bombers;
- o Deployment by the early 1990s of about 3,200 air-launched cruise missiles, initially on refitted B-52 bombers and eventually on both B-52 and B-1B bombers;
- o Continued procurement through 1993 of Trident submarines at the current rate of one per year to a total of 20, and deployment

on most Trident submarines by 1996 of the new, larger Trident II (or D-5) missile currently being developed;

- o Deployment by 1988 of about 400 nuclear-armed, sea-launched cruise missiles on some attack submarines and surface ships.

Costs of the Plan

The Congressional Budget Office (CBO) estimates that it would cost approximately \$50 billion a year in budget authority—or a total of about \$250 billion over fiscal years 1984-1988—to build, modify, and operate all of the strategic forces and their associated elements. The estimates include both direct costs and indirect costs, such as personnel support. (These approximations are based on estimates made last year, since details of direct and indirect costs beyond 1984 are not available for the Administration's latest five-year defense plan. The costs should, however, provide a rough guide to likely totals under the latest program.)

Within this total, investment costs of strategic offensive forces would reflect the timing and production of key systems: the MX missile and B-1B bomber in the mid-1980s; the Advanced Technology bomber, Trident II missile, and SICBM in later years. Operating costs would increase during the late 1980s and early 1990s as new forces were added and only a few older systems were retired. Later, when many currently deployed systems are retired, operating costs would decrease.

A Major Expansion

The Administration's modernization plan would represent a quantitative and qualitative buildup of U.S. strategic forces. It would mean not only an increase in the numbers of nuclear warheads that could be delivered in the event of a Soviet attack, but also a response to changes in Soviet strategic forces and doctrines and a decision to maintain the U.S. strategic nuclear triad.

The Buildup in Quantitative Terms. The quantitative effects of the Administration's proposed buildup on capabilities can be assessed using two measures common to strategic analysis:

- o Total number of warheads, a measure that serves as a rough guide to the number of targets that can be attacked; and
- o Number of "hard-target" warheads that can destroy targets hardened against nuclear effects, such as missile silos and command bunkers.

The Administration's plan would result in a substantial increase in U.S. strategic capabilities, relative to current levels. The size of the increase depends on the scenario assumed for a nuclear war. In one plausible scenario, the Soviets mount a major nuclear attack on U.S. weapons, but the attack comes after a period of warning long enough so that almost all U.S. forces are poised to retaliate. In these circumstances, the Administration's plan would increase the numbers of surviving U.S. warheads available for retaliation by 65 percent, from 6,000 in 1983 to 9,900 in 1990 (see Summary Figure 1). By 1996, the number of available surviving warheads would fall back to 9,300 as some older submarines and bombers were retired. (These results assume that the follow-on SICBM

land-based missile supplied 600 surviving warheads--approximately the midpoint of survivability estimates attributed last fall to the Air Force for MX missiles deployed in the closely spaced basing mode.)

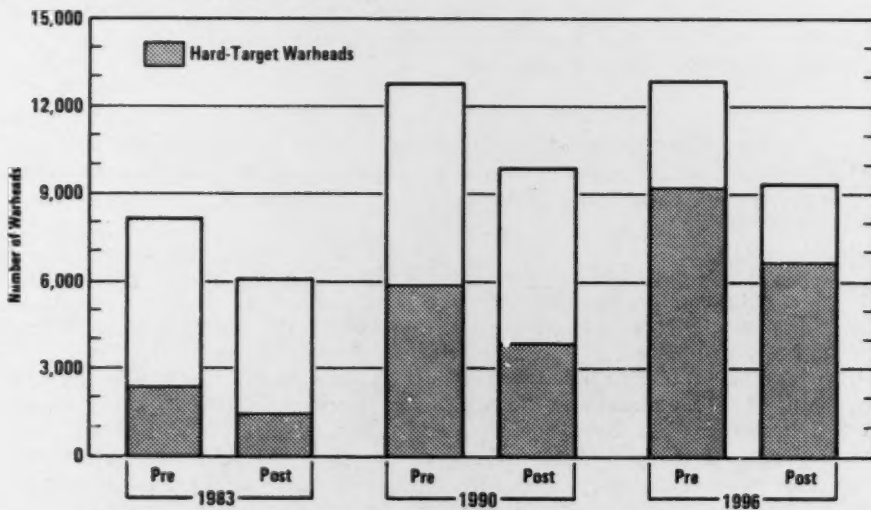
The increase in capabilities would be more dramatic if measured by the numbers of available surviving warheads that could destroy hardened targets. That number would rise from 1,400 in 1983 to 3,900 by 1990 (an increase of more than 175 percent) and to 6,700 by 1996 (an increase of more than 375 percent).

The subset of these surviving hard-target warheads that are considered "prompt" would grow even more substantially. Prompt warheads are those that can be launched and delivered to a target in a relatively short period of time, possibly destroying Soviet military forces before they launch another strike.

If the Soviets were to attack with no warning at all, the Administration's plan would still result in a buildup over today's levels. The measures of effectiveness would, however, be roughly 60 percent of those in an attack with warning, because fewer forces would be poised to escape

Summary Figure 1.

Administration's Strategic Force Buildup, 1983-1996 (Pre- and Post-Attack, With Warning)



SOURCE: Congressional Budget Office.

the Soviet attack. Although such a scenario must be considered in planning, many believe that a "bolt-out-of-the-blue" attack is less plausible than one occurring after a period of tension, nonnuclear war, or other warning.

Finally, the Administration's plan would increase the total counts of warheads available before any attack from 8,800 today to about 14,000 in 1990 and 1996. These simple counts of pre-attack warheads are not the

best measure of strategic capability, though they are useful for comparative purposes.

The Buildup in Perspective. The scope of the Administration buildup must be judged in the perspective of changing Soviet forces and in terms of what might be needed to deter the Soviets from initiating a nuclear war. Since the early 1960s, the Soviets have been engaged in a consistent expansion of their strategic offensive and defensive forces. Land-based ICBMs have been the centerpiece of this modernization, but the Soviets have also deployed a substantial sea-based force and are modernizing their strategic bomber force. Within the past ten years or so, they have more than quadrupled the number of nuclear warheads in their strategic offensive forces, to a present level of about 9,000 strategic warheads. By the mid-1990s, in the absence of arms control limits, regular replacements and additional force expansion could result in another doubling of this inventory.

Over the same period, U.S. defense planners have modified their view of the forces and strategies needed to deter the Soviets. In the early 1950s, plans called for striking urban areas. Under the mutual assured destruction (MAD) philosophy of the 1960s and 1970s, deterrence rested on the threat of inflicting "unacceptable damage" on the Soviet Union if it attacked. Current strategic doctrine holds that deterrence requires that the United States not only have the capability to wage an all-out attack, but also the means to engage in a nuclear war that could involve a series of limited attacks. Not everyone agrees with this view, however. Some, for example, would prefer simpler, more direct approaches such as retaining an assured capability to destroy a large number of Soviet cities and industrial facilities. By this last metric, both superpowers have many times the needed numbers of nuclear warheads.

This study does not attempt to measure the deterrent capability of the Administration's program or alternatives to it. Instead, it concentrates on quantifying the changes in U.S. strategic weapons inventories that would be brought about by these approaches and on explaining their qualitative effects.

Important Qualitative Aspects of the Administration's Plan. The Administration's plan has some aspects that cannot be readily quantified. Most important, it seeks to maintain a triad of strategic nuclear forces, each able to survive a Soviet first strike. A survivable triad serves as a hedge against a technological breakthrough that might neutralize any one element; it also complicates Soviet planning for both attack and defense; and it requires the Soviets to spread their research and development efforts against three different types of systems. Moreover, in a nuclear war the triad of forces would act in concert; for example, an attack on U.S. land-based missiles could provide several minutes of warning that would enable the bomber force to respond. The Administration also argues that maintenance of the traditional force configuration is essential to the U.S. bargaining position in arms control negotiations.

The modernization of all three triad elements over a number of years would also provide open production lines for the manufacture of additional systems should the threat increase. Finally, modernization would decrease the average age of U.S. forces and equipment, presumably improving their reliability and maintainability. In 1990, for example, 60 percent of bomber weapons would be carried by aircraft less than 15 years old, compared with only 10 percent today.

HOW THE ADMINISTRATION'S PLAN WOULD BE AFFECTED BY ARMS CONTROL

Arms control agreements could be expected to modify the Administration's modernization program, but not to a great extent. The Administration's proposals in the Strategic Arms Reduction Talks (START) would limit both the United States and the Soviet Union to 5,000 ballistic missile warheads--half of which at most could be on land-based missiles--and 850 ballistic missiles.

It might be necessary to change the ballistic missile limit to accommodate the follow-on land-based missile (SICBM), especially if it has only one warhead. This could be done by raising the limit to more than 850 missiles, changing to a new type of limit, or relying solely on the warhead limits.

With this exception, the Administration's modernization program could be completed under START, so long as enough older systems were retired first. Because of the high priority accorded strategic modernization, the Administration might choose to implement a START agreement by retiring older systems, though it has not publicly said so. This might mean 15 to 20 percent fewer surviving warheads, but would not greatly affect the numbers of surviving hard-target warheads because these are primarily on new systems. Investment costs would not be much reduced. Operating costs would decrease as older systems were retired, but there would probably be added costs to dismantle these systems. On balance, costs would be lower by about \$16 billion through the year 2000--a few percent of total strategic costs in this period.

Continued adherence to the numerical limits of the Strategic Arms Limitation Talks (SALT) would have less effect on the modernization program than would START. For example, relative to the Administration's program unconstrained by SALT, counts of surviving warheads after a Soviet first strike would be 6 percent less under the SALT limits in 1990, and there would be almost no difference by 1996.

ALTERNATIVES TO THE ADMINISTRATION'S PLAN

The scope and high cost of the modernization program has led to some alternative proposals. The Congress could terminate the MX missile. It could make an even more far-reaching decision and discontinue funding for new land-based missiles, emphasizing submarine-based missiles instead. Or it could terminate the B-1B bomber program, in favor of upgrading existing B-52 bombers and expanding the air-launched cruise missile program.

Alternative 1: Adopt the Administration's Plan Without the MX Missile System

As part of its modernization of the land-based missile force, the Administration proposes to substitute 100 MX missiles for currently deployed Minuteman missiles in silos near Cheyenne, Wyoming. The system would probably be fully deployed by 1988. An alternative would be to cancel production and deployment of the MX missile, but provide for research and development--and possible production and deployment--of the small ICBM recommended by the President's Commission on Strategic Forces.

Arguments Favoring the MX. Although the discussion below suggests that few of the 100 MX missiles would be likely to survive a Soviet first strike should the United States choose to ride out the attack, deploying the MX would nonetheless provide some advantages. The calculations of Soviet ability to attack and destroy Minuteman silos are theoretical. In an actual attack, the Soviets could not be certain of destroying all or even most of the MX missiles, and this might contribute to deterrence. They might be further deterred by the consideration that the United States could conceivably launch all of the MX missiles after receiving warning of a Soviet attack but before Soviet missiles reached their ICBM targets. This could occur if the United States launched its ICBMs on warning—which is neither assumed nor precluded by current U.S. policy—or if it launched them after other strategic forces had been attacked.

Deployment of the MX missile, the first new U.S. land-based missile in 13 years, might also facilitate reaching an arms reduction agreement with the Soviets. This, according to the President's Commission on Strategic Forces, would hold down the costs of deploying a survivable land-based missile force using the SICBM. Deploying the MX would facilitate arms reduction by showing determination to keep pace with Soviet deployment in recent years of a whole new generation of land-based missiles, plus continuing Soviet modernization of its ICBM force. The MX would also give the United States the capability to destroy those Soviet targets most hardened against nuclear blast, just as the Soviets can destroy such targets in the United States with their modern, land-based missiles.

In addition, deploying the MX would open a production line for land-based missiles, which would facilitate expansion of the land-based missile force if required by Soviet actions or by problems with other U.S. forces. Finally, proponents of the MX point to the positive attributes of a land-based missile force such as sureness of command and control, accuracy of warheads, high peacetime alert rates, and targeting flexibility.

Small Quantitative Contribution of the MX. Despite these advantages, the MX in Minuteman silos would be no more survivable in the face of Soviet attack than the missiles they replaced. CBO estimates that a major Soviet strike that the United States rides out could destroy all but 10 percent of them in 1990, and all but 5 percent by 1996 as accuracy continues to improve.

This limited survivability, coupled with the major buildup in other U.S. strategic forces, means that deploying the MX would contribute relatively little to U.S. retaliatory capabilities. Specifically, 100 MX in Minuteman silos would contribute:

- o 3 percent in 1990, and less than 1 percent in 1996, of all U.S. hard-target warheads that would be expected to survive and be available for retaliation in the nuclear scenario considered most likely—a Soviet first strike occurring after some warning.
- o 5 percent in 1990, and 1 percent in 1996, of all hard-target warheads that would be expected to survive a Soviet attack occurring without warning.

By other measures, the contribution of the MX would be larger, though in most cases still modest. In 1990, for example, MX would contribute 11 to 52 percent of all prompt, hard-target capability that would survive a Soviet first strike that occurred after warning of the attack; the total warheads of this type contributed by MX, however, would

be fewer than 100. By 1996, as many new submarines and land-based missiles entered the force, the contribution of MX would fall to between 1 percent and 7 percent of the prompt, hard-target capability remaining after a Soviet first strike. The ranges depend on whether or not Trident submarines equipped with the new Trident II missile are counted, and assume that 600 surviving warheads are provided by SICBM. Prompt, hard-target weapons could be most important in deterring, or, should deterrence fail, in fighting a limited nuclear war involving a series of exchanges with the Soviets.

The MX would contribute more substantially if the United States chose not to ride out a Soviet first strike. If the United States launched all land-based missiles, including the MX, before they came under actual attack, then the contribution of the MX would increase significantly. It would contribute between 17 and 35 percent of available surviving prompt, hard-target weapons in 1996 under this assumption. The range depends again on whether or not Trident II missiles contribute to this measure. U.S. policy neither assumes nor precludes such a launch-on-warning strategy.

Qualitative Arguments Against the MX. Some fear that the MX missile, if deployed in a nonsurvivable basing mode, would be destabilizing in a crisis. According to this view, the Soviets might be tempted to launch first to preclude a U.S. first strike. Moreover, even without the MX, the United States would retain some of the advantages of land-based missiles with the 1,000 remaining Minuteman missiles. In reply to the argument that the MX is needed to keep the Soviets interested in arms control, opponents contend that the rest of the U.S. strategic buildup may be enough to ensure serious negotiations.

Savings from Terminating the MX. Terminating the MX would mean spending no more money on missiles or basing in 1984 and beyond. According to the Air Force, this would yield total savings in 1984-1988 of \$17.9 billion in budget authority (see Summary Table 1). This would represent about 7 percent of total strategic costs in this period. Total savings in 1984 and beyond would be \$18.4 billion. There would be no significant change in operating costs, because the United States would continue to operate the Minuteman missiles scheduled to be replaced by the MX.

For consistency with recent Administration announcements, this study shows savings relative to the current MX plan. Savings relative to the President's January 1983 Budget would be higher because that budget assumed an earlier, more expensive version of MX. In 1984 and beyond, savings relative to the budget would total \$28.6 billion of budget authority.

An Alternative Approach. The Congress could decide to spend some of these savings on improving existing Minuteman missiles. At least the same increase in prompt hard-target capability generated by the MX could be obtained at lower cost by upgrading the present force of Minuteman III missiles. Specifically, by installing the MX guidance system on 550 Minuteman IIIs, and higher-yield warheads on 250 missiles not currently having them, a force of hard-target Minuteman IIIs could, according to the Air Force, be in place by around fiscal year 1993 at a cost of about \$14 billion. This would save about \$4.4 billion over the Administration's current MX plan.

Nevertheless, the upgrading might not produce a force with as much operational flexibility as the MX system. Neither would it be deployed as

SUMMARY TABLE 1. SAVINGS FROM ALTERNATIVES TO THE ADMINISTRATION'S STRATEGIC PROGRAM
(By fiscal year, in billions of 1984 budget authority dollars)

	1984	1985	1986	1987	1988	Total 1984 to 1988	Total 1984 to 2000
Alternative I—Cancel MX <u>a/</u>							
Investment	4.6	5.0	3.6	2.8	1.8	17.9	18.4
Operating	—	—	—	—	—	—	—
Total	4.6	5.0	3.6	2.8	1.8	17.9	18.4
Alternative II—Substitute Sea-based Forces for Land-based Forces <u>a/</u>							
Investment	4.9	4.1	3.9	2.4	4.6	19.9	41.4
Operating	—	—	—	—	—	—	19.6
Total	4.9	4.1	3.9	2.4	4.6	19.9	61.0
Alternative III—Cancel B-1B Bomber							
Investment	3.9	7.0	4.3	-1.6	-2.0	11.7	10.8
Operating	—	<u>b/</u>	0.1	0.4	0.6	1.1	4.8
Total	3.9	7.0	4.4	-1.2	-1.3	12.8	15.5

SOURCE: Congressional Budget Office.

NOTES: Numbers may not add to totals because of rounding. Costs do not include those funded by the Department of Energy.

a/ Savings would be higher relative to the President's January 1983 Budget, which assumes an earlier, more expensive MX plan.

b/ Less than \$100 million.

soon nor offer all of the qualitative benefits that might come from deploying the MX missile, such as a demonstration of steadfastness of purpose that would strengthen the hand of U.S. arms control negotiators.

Alternative 2: Substitute Missiles on Submarines for Land-Based Missiles

For more than a decade, the United States has sought a basing mode for a land-based missile that could guarantee survivability against a Soviet

first strike and also respond to environmental and political concerns in this country. Cost considerations, plus continued difficulties in meeting the other concerns, might prompt the Congress to abandon the quest for a survivable land-based missile force in favor of increasing the capability of the submarine-based forces. The following discussion examines the consequences of terminating all efforts toward new land-based missiles—including the MX and the small ICBM—in favor of building more Trident submarines equipped with the new Trident II (D-5) missile.

Quantitative Contributions of Submarine-Based Missiles. Deploying additional submarines would roughly compensate for the loss of the land-based missiles. CBO estimates that five to nine additional Trident submarines, equipped with the new Trident II missile, would about equal the surviving capability of the 100 new MX missiles plus the 600 surviving warheads assumed to be contributed by the follow-on SICBM land-based missile planned for the 1990s. Five additional submarines would be needed to match the number of hard-target warheads, while nine additional submarines would be needed, given current operating procedures, to match the number of prompt, hard-target warheads.

Assuming production of Trident submarines was increased to three every two years starting in 1985, these added submarines could be produced with existing shipyard capability and would all enter the fleet around the turn of the century. This would be just a few years later than the full deployment of the follow-on SICBM land-based missile, to occur in the middle to late 1990s.

Savings from Submarines. Five additional Trident submarines and their missiles would cost about \$12.8 billion to buy and \$0.3 billion a year to operate, for 20-year costs of \$18.8 billion. Nine additional submarines would cost roughly twice as much.

The cost of land-based missiles would be substantially more than even the nine additional Tridents. The cost for the Administration's current MX plan alone would be \$18.4 billion in 1984 and beyond. Should a road-mobile, small ICBM eventually be deployed as part of the Administration's plan, its cost would be substantial. According to the Department of Defense, fielding 1,000 such missiles would cost \$46.2 billion to buy, plus about \$3 billion in annual operating costs, for a 20-year life-cycle cost of \$107 billion. Taken together, the life-cycle costs of the MX and small ICBM would exceed those of nine additional Tridents by a factor of more than three.

Aside from its potential long-term savings, this approach would clearly cut costs over the next five years. Despite the added costs of beginning even a nine-submarine addition, net savings would amount to a total of \$19.9 billion in budget authority (see Summary Table 1). Most of the savings would come from terminating deployment of the MX missile.

Forgoing the Key Advantages of a Survivable Triad. Giving up attempts to develop a survivable, land-based missile would mean forgoing many of the important advantages of a triad of U.S. forces, each able to survive a Soviet first strike. A triad hedges against a loss of capability in any single element, and makes it more difficult for an opponent to develop a successful attack. Striving for survivability in each triad leg also minimizes the risk of a future Soviet technological breakthrough. Moreover, land-based missiles have an advantage over the other legs of the triad in greater responsiveness and more assured command and control.

Under this alternative, the United States would be concentrating more of its strategic deterrent in the submarine force. Even though submarine-based missiles are thought by many to be invulnerable through the 1990s, there can be no absolute certainty of it. Again, some maintain that failure to deploy a new land-based missile would show a lack of resolve on the part of the United States.

This alternative would not, however, mean forgoing all of the advantages of land-based missiles. The United States would still have 1,000 Minuteman missiles, with their 2,100 warheads, at least through the end of this century.

Alternative 3: Cancel B-1B and Upgrade Existing Bomber Force

The Administration proposes to buy and deploy 100 B-1B bombers by 1988, to be followed in the early 1990s by deployment of 132 Advanced Technology—or "stealth"—bombers (ATBs). Given the promise of a capable ATB and the ability to upgrade the B-52 and air-launched cruise missile (ALCM) forces to provide some of the near-term capabilities of the B-1B, the Congress might elect to cancel the B-1B program.

Upgrading the B-52 and ALCM Forces. The United States could upgrade its existing bomber force by further improvements to B-52s so that more could be retained through the 1990s, and by converting them to carry more air-launched cruise missiles. In addition, the total number of cruise missiles could be expanded and the rate of buy maintained at current levels in the near term.

These actions, along with termination of the B-1B, would leave U.S. forces with about the same number of weapons before a Soviet first strike. After a Soviet attack without warning, this alternative would contribute 4 percent fewer warheads to U.S. retaliatory capability than the Administration's program in 1990, and 3 percent fewer in 1996. These differences would be smaller if the attack came after some warning. The difference occurs primarily because the B-1B would be better able to escape a Soviet attack on its bases than would the B-52, and because the newer force would presumably be able to sustain a somewhat higher peacetime alert rate.

Savings from Terminating B-1B. Stopping further production of the B-1B would cut costs. Even when offset by the added costs of improving the B-52 force and buying more cruise missiles, this alternative would save a total of about \$12.8 billion in budget authority in 1984-1988 and \$15.5 billion through the end of the century (see Summary Table 1). Critics of the B-1B argue that these savings may be needed, in a period of constrained defense budgets, to ensure that sufficient funds are available to develop and deploy the ATB, which they see as offering the greatest long-run promise.

Key Advantages of the B-1B. These cost and effectiveness differences do not necessarily capture the whole issue. For example, if the B-1B were canceled in favor of upgrading the current force of B-52 bombers and ALCMs, there would be only a modest reduction in warheads able to survive a Soviet first strike and retaliate. But this does not take into account the B-1B's greater ability to penetrate Soviet air defenses and deliver its warheads. Unclassified estimates of the B-1B's greater potential are not available, but it may be substantial.

The B-1B would also, as a new bomber, offer a hedge against the risk that the technically sophisticated ATB might not be developed on time or at a reasonable cost. Moreover, the B-1B would hold down the average age of the U.S. bomber fleet, leading to improved reliability and maintainability. By 1996, even with the ATB, the fleet would average 23 years without the B-1B, but only 14 years with it.

Finally, the B-1B could make a substantial contribution to U.S. non-nuclear forces. It would, for example, provide a highly capable aircraft for the long-range missions envisioned in support of the Rapid Deployment Forces.

MINORITY VIEWS OF SENATOR MARK O. HATFIELD

I oppose this resolution. I believe that deployment of the MX missile in Minuteman III silos will not improve our strategic deterrent and not promote meaningful arms negotiations, but will increase the likelihood of nuclear war.

The MX missile placed in existing Minuteman silos continues to be as vulnerable to Soviet attack as our current missiles. Because the silos will not be hardened, the MX missile with 10 warheads will be as vulnerable to attack as Minuteman III missiles with 3 warheads. Basing the MX in existing Minuteman III silos makes it a "high value" target, and this is exactly what the Scowcroft Commission recommended against. Yet, despite the continued vulnerability of fixed-site basing, the President proposes to deploy 100 MX missiles, with 1,000 warheads, in existing Minuteman silos. Moreover, the Congressional Budget Office estimates that by 1996 the MX will comprise less than 1 percent of our surviving hard-target kill capable weapons if the Soviets were to attack. What, then, are we buying for \$24,000,000,000, particularly when the President recommends deployment of a less vulnerable missile, the Midgetman, in the early 1990's?

Many argue that without the MX the United States will lose its arms control leverage with the Soviets. Not only does this ignore the findings of the Scowcroft Commission which acknowledged the continued vulnerability of the MX, but it fails to recognize several other modernization programs which constitute more of a credible threat to the Soviets than does the MX. Clearly the United States is not standing still in modernizing its strategic forces. Within the President's trillion-dollar defense budget, for example, are plans to build 100 B-1 bombers; the advanced "Stealth" bomber; 15 Trident submarines with highly accurate D-5 missiles; 3,000 air-launched cruise missiles; ground-launched cruise missiles; and the deployment of Pershing II missiles in Western Europe.

One must also question the deterrent effect and the ultimate usefulness of a missile whose basing mode has been substantially altered from earlier versions. What will be the negotiating leverage of an MX system that remains vulnerable to Soviet attack and which is one-half to one-quarter the size of previously proposed systems?

Unless the MX is to be used as a first-strike weapon, critical questions exist even for those who support selective modernization. I share those concerns about vulnerability and strategic deterrence and fear especially that deployment of the MX will do little for arms nego-

tiations and, instead, exacerbate the precarious mistrust which already exists and which may lead to an unintended and irrevocable action we are all attempting to avoid.

MARK O. HATFIELD.

ADDITIONAL VIEWS OF SENATOR TED STEVENS

In view of the Committee vote to support the MX resolution, it is my wish as chairman of the Defense Subcommittee to insure that the Committee report accurately reflects what I believe to be the views of the majority vote.

In recommending approval of the accompanying resolution, I believe the Committee has recognized that the Nation cannot afford to vacillate at this critical time on the urgent need to modernize its land-based ICBM forces. The strategic triad that has worked so effectively as a deterrent to nuclear war must be preserved. And to be preserved, the 10-year development of MX and the more than \$6,000,000,000 already invested in this new generation of ICBM's must be sustained.

Available technology does not permit a full immediate solution to the problem of vulnerability of our land-based leg of the triad, and the Scowcroft Commission recommendation to deploy the MX in existing Minuteman silos does not guarantee survivability. This deployment plan is an interim measure that retains the MX as a potent weapon of deterrence while basing improvements and other advances such as the "Midgetman" force can be developed.

Accordingly, while the accompanying resolution is narrow in its application to the release of fiscal year 1983 appropriations for MX basing development and flight testing, I regard the Committee's approval also as a preliminary endorsement of the entire Scowcroft Commission recommendation that the President has endorsed in full as a complete package. It is not realistic to support the interim MX basing plan without a commitment to move forward with the other important initiatives developed by the Commission.

The importance of the MX to the United States negotiating posture in future strategic arms limitation talks was also a key factor in the decision to support the accompanying resolution. The President must have the strongest possible bargaining position to achieve realistic and favorable arms control agreements, and strong congressional support to produce and deploy the MX along with a vigorous program to develop more survivable land-based systems will provide that essential leverage. To do less, in my judgment, is to turn away from the triad concept and hand the Soviets the full advantage with land-based ICBM's.

I believe a majority of the Committee did not accept the interpretation offered by many critics of the Scowcroft report that deployment of the MX in Minuteman silos is tantamount to adopting a launch-on-warning doctrine. Limiting the deployment to 100 missiles precludes any such dangerous and destabilizing policy. This limited deployment, however, does increase the potency of the land-based ICBM force and

strengthens its effectiveness as a deterrent to any first strike by a foreign power.

While the Committee decision endorses modernizing the land-based leg of the strategic triad, it is not an irrevocable commitment to produce and deploy the MX in any single basing mode. Future congressional action on appropriations will continue to control both the extent and pace of deployment and can be adjusted to reflect favorable arms control agreements and technological advances. Congress will retain full flexibility in future years in shaping all our strategic forces—land, sea, and air.

In supporting the President's April 19, 1983, decision to endorse the recommendations of his bipartisan Scowcroft Commission, we should recognize many difficult decisions had to be taken by that Commission. Not the least of these was its acknowledgement that there is no basing mode available during this decade that satisfactorily redresses the vulnerability of this Nation's ICBM force. On the other hand, as acknowledged by the members of the Commission, survivability is not the only issue to concern this Committee in making judgment on the MX resolution. Rather, there are at least five other major issues which had to be addressed.

First, there is the aging nature of this Nation's ICBM force. For example, the Titan missile force which is now being retired was first deployed in 1962. The most modern missile in our ICBM arsenal, the Minuteman III, was first flight tested 18 years ago. And as each year passes, this force becomes more costly to maintain and less reliable in its expected performance.

Second, largely because this Nation has not tried to match the Soviet Union's aggressive deployment of a prolific strategic rocket force, and because the Soviet Union has mounted a substantial effort to harden both its forces and its command and control infrastructure, our ICBM force is no longer capable of threatening those targets which the Soviets value most. This resulting asymmetry in prompt hard target kill capability is understood by the Soviet Union and could portend a potentially dangerous situation in a crisis between the two super powers. The near term deployment of the MX missile effectively redresses this asymmetry, thus inhibiting Soviet adventurism during a potential crisis and thereby strengthening deterrence.

Third, there is the point made by the Scowcroft Commission that Soviet perception of United States resolve to modernize its ICBM force will provide significant incentive to the Soviet leadership to engage promptly in meaningful and verifiable arms reduction negotiations.

Fourth, our friends and allies will also perceive our national will to proceed with ICBM modernization on our own soil as a strong inducement to their commitment to deploy modernized U.S. nuclear forces on NATO soil.

Finally, there is an important spending reduction available. In fiscal year 1983 constant dollars the MX deployment in Minuteman silos represents a cost savings of some \$10,000,000,000 over the closely spaced basing program and \$30,000,000,000 over the multiple protective shelter program.

In the longer term, I believe Congress will support moving forward with development and deployment of a small missile and the continuation of research and development on various hardening programs for either fixed or mobile launchers. It is my hope that, when viewed as an entire package, the ICBM modernization program in the near term will expedite the capping of a dangerous nuclear arms race with the Soviets, and in the longer term provide the technological basis for establishing a more stable strategic balance at considerably lower force levels than both sides possess today.

TED STEVENS.

ADDITIONAL VIEWS OF SENATOR JAMES A. McCLURE

DEPLOYING MX ICBM IN EXISTING SILOS IS MINIMAL RESPONSE TO SOVIET THREAT

There are eight main reasons for deploying the MX in existing Minuteman silos. First, the Soviets already have 820 MX-equivalent ICBM deployed, and last year alone they deployed more MX-size warheads than the United States plans to deploy late in this decade. Second, the Soviets are 13 years ahead of the United States in deploying ICBM's equivalent to the MX, and also 13 years ahead of the United States in deploying a new small mobile ICBM. Third, the Soviets are already following both of the Scowcroft Commission's recommendations. Fourth, 100 MX is only one-eight the counterforce capability the United States would need to have counterforce parity with the Soviets. Fifth, MX will add, albeit marginally, to U.S. strategic force and ICBM survivability. Sixth, because the Soviets are breaking out of the SALT I ABM Treaty, the MX will increase U.S. ability to penetrate Soviet defense. Seventh, massive U.S. unilateral restraint in strategic program cutbacks over the last 15 years makes MX all the more necessary. Eighth, the United States should also deploy 100 stockpiled Minuteman III MIRVed ICBM's at the same time we deploy MX, giving the United States the option to have 650 or even 750 MIRVed ICBM's.

Last year, the Soviets deployed more MX-size warheads—over 1,000—than the United States plans to deploy on MX in the future years of 1987 and 1989. The Soviets already have now, today, over 820 MX-equivalent ICBM's deployed. We have zero MX's, and will not have our first MX operational until 1987 at the earliest—if the Congress approves.

Many people argue that the MX is a dangerous first strike weapon which will be provocative to the Soviets. But the Soviets already have over 6,000 ICBM warheads deployed, compared to our 2,000. Moreover, these Soviet warheads are on the average 10 times as powerful as each U.S. warhead, and they are even more accurate. Thus we are urged to accept calmly this 3 to 1 Soviet advantage in ICBM counterforce capability, yet if the U.S. deploys MX, this will be judged to be provocative.

People forget some of the basic strategic asymmetries between the United States and the U.S.S.R. The Soviets have over twice as many hard targets as the United States, which are, on the average, over three times as hard as U.S. hard targets.

Thus, in order to have even parity in counterforce capability, the United States needs more counterforce capability than the Soviets. To

quantify this asymmetry, the Soviets have over 2,000 hard targets, which are three times as hard as U.S. silos. In order even to be able to threaten a counterforce strike, the United States needs to target at least two warheads on each hard target. Thus the United States would need 4,000 hard target warheads for this purpose. Moreover, in order to knock out the Soviet hard targets, the United States would need at least 4,000 more warheads to compensate for high Soviet target hardness. In sum, the United States would need a total of 8,000 ICBM warheads to have even hard target parity. With the MX, the United States will have only 1,000 hard target warheads, only one-eighth of the number needed for counterforce parity with the Soviets.

The Soviets are 10 years ahead of the United States in developing ICBM's equivalent to the MX. They are 6 years ahead of the United States in developing a new small mobile ICBM. We need MX to try to catch up.

The Soviets are already following both of the Scowcroft Commission's recommendations by developing both an MX size ICBM and a small mobile ICBM.

The Scowcroft Commission's report is alleged to have rejected the validity of the "window of vulnerability" of U.S. strategic forces. Yet the "window of vulnerability" concept focused primarily on the vulnerability of the U.S. Minuteman ICBM force. The Scowcroft Commission indeed in several places recognized quite emphatically the total vulnerability of our ICBM force. It is significant that while reemphasizing our ICBM window of vulnerability, the main contribution of the Scowcroft report was to point out the present relative survivability of our bomber and SLBM forces.

Today about three-quarters of our bombers and about one-half of our submarines are vulnerable, but by 1987, when MX is first operational, these vulnerabilities will increase. MX will increase the Soviet targeting problem.

In sum, there is indeed a window of vulnerability not only to our ICBM force, but increasingly also to our bomber and SLBM forces. But this vulnerability should not prevent us from modernizing each leg of the triad.

In four places in the Scowcroft Commission report there is a suggestion that the Soviets may be violating the SALT I ABM Treaty by developing a breakout capability for a nationwide ABM defense. The Soviets have in fact developed the capability to breakout rapidly of the ABM Treaty. This Soviet advantage makes MX deployment all the more necessary, in order to enhance U.S. ability to penetrate their defenses.

Why is it that the Soviets can be allowed to deploy three times the U.S. ICBM counterforce capability, while when the United States tries to deploy a much smaller capability, it is viewed as destabilizing?

U.S. unilateral restraint over the last 13 years has been amply demonstrated. The United States has unilaterally deactivated over 710 strategic delivery vehicles carrying over 6,000 warheads over the last 15 years, while the Soviets have added over 1,000 missile launchers and

over 6,000 warheads. The MX should not become another case of U.S. unilateral restraint.

How can the Senate reject deploying only 100 unsurvivable MX ICBM's, when the United States is already deactivating unilaterally 160 survivable Polaris SLBM's, 80 relatively survivable B-52 D bombers, and 54 Titan II ICBM's, a total of 292 U.S. delivery vehicles, carrying over 500 warheads, about 33 percent of existing U.S. megatonnage? The United States is unilaterally deactivating about one-third of our existing strategic capability, much of which is relatively survivable. In light of this U.S. restraint we should, therefore, be more willing to approve MX deployment.

There is a final reason to deploy MX, which adds to U.S. strategic options.

For 2 years, fiscal 1981 and 1982, Congress authorized deployment of 50 or 100 stockpiled Minuteman II MIRVed ICBM's. These 50 to 100 Minuteman III would be deployed in existing Minuteman II silos, which do not now contain MIRVed ICBM's. Hence this deployment would next year violate the 1,200 ceiling on MIRVed missiles of the unratified SALT II Treaty. The deployment was rejected by the Reagan administration in order to comply with the unratified SALT II Treaty.

Now the administration is recommending the deployment of 100 MX in Minuteman silos which already contain MIRVed missiles. This would not violate SALT II.

The survivability of both deployments is the same. This is the key factor. We should deploy both the Minuteman III's and the MX's in existing silos. Indeed, I urge that we deploy 100 MX in Minuteman silos, and at the same time also deploy 1,000 stockpiled Minuteman III ICBM's in Minuteman II silos. This would require redeployment of Minuteman III in Minuteman II silos. If the 100 Minuteman III's which are replaced by the 100 MX's and the 100 Minuteman III in stockpile are instead redeployed in Minuteman II silos, we could have a total of 750 MIRVed ICBM's.

Survivability is the main problem for MX. Deployment of 100 MX in Minuteman silos would be much more survivable with deployment of the ABM capability allowed the United States under the ABM Treaty—100 ABM launchers. But the United States eschewed ABM defense for MX in Minuteman silos up to the allowed level. Indeed, I would urge that we consider reactivating our one allowed ABM complex with 100 ABM launchers. This could allow us to protect about 300 MIRVed ICBM's.

JAMES A. McCLURE.

ADDITIONAL VIEWS OF SENATOR ALFONSE M. D'AMATO

After much study and deep reflection, I have concluded we must proceed with production and deployment of the MX missile. I believe this step is essential for the success of our efforts to protect freedom and preserve world peace. Our decision on S. Con. Res. 26, which concerns only the MX, also directly affects the probability of success of our nuclear arms control negotiating efforts and our strategic modernization program. Both of these aspects of this decision are vital to our national security.

First, I believe President Reagan's endorsement of the full set of recommendations, including the arms control recommendations, of the Scowcroft Commission, is a major step forward in our arms control policy. Having carefully reviewed the report issued by the President's Commission on Strategic Forces, I believe the decision to proceed with the MX missile's production and deployment is an inseparable, integral portion of the Commission's well thought-out plan. It is now clear that Soviet negotiating behavior is firmly based upon the objective facts of the strategic equation as perceived by Soviet military and political leaders. The MX is not a "bargaining chip." Its primary arms control utility is found in the impact of its military capabilities on Soviet thinking. While it is true that the President has declared that all of our strategic systems are on the bargaining table, the real significance of MX is that its deployment forces the Soviet Union to redesign their ICBM force in the direction of stability and away from their present first strike posture.

The Commission's emphasis on a shift toward a most stable deterrent is critical to the prospects for peace. While many have suggested we should terminate the MX program and proceed immediately with a crash program to develop the small intercontinental missile, they have ignored the absence of any incentive for the Soviet Union to also proceed in this same direction. MX provides this incentive without being a U.S. first strike weapon. Though there will be too few MX hard-target warheads to threaten a disarming strike against Soviet ICBM's, enough warheads can be expected to survive a Soviet first strike against us to credibly threaten key portions of the Soviet strategic rocket forces. This forces them to move toward small, mobile single warhead missiles and away from their present emphasis on heavy MIRVed ICBM's. This effect of the MX program is central to our efforts to establish a more stable strategic deterrent.

Our history of negotiations with the Soviet Union is replete with examples of successes when the Soviet Union is confronted with credible U.S. forces, and it is just as replete with failures when we have asked

the Soviet Union to reciprocate our gestures of military self-restraint by surrendering some serious military advantage they already possess. This decision to go forward with the MX program is, to my mind, the decision we must make in order to lay the necessary foundation for success in our arms control efforts. If we are very fortunate, we may secure an agreement between now and 1986 which will make deployment of the MX unnecessary. I will urge the President to seek such an agreement.

I applaud the administration's reconsideration of our strategic arms control negotiating strategy. The President's endorsement of the Scowcroft Commission's report and his interest in the concept of a guaranteed mutual nuclear build-down hold great promise for the future. Counting warheads instead of launchers for arms control purposes is clearly the common sense approach to the problem. Reducing the number of warheads available to each side's strategic forces is clearly a good way to reduce the danger of nuclear war. This debate concerning the MX, as a part of the larger national debate on nuclear weapons, has brought about this healthy and positive change in our approach to solving the arms control problem.

A major factor in my decision was my concern over our European allies' reaction to a U.S. decision not to go forward with the MX. The need to either achieve a negotiated reduction in Soviet theater nuclear forces or to balance those forces through the NATO-requested deployment of Pershing II and ground launched cruise missiles is clear. Given the politically precarious nature of the situation in NATO and the intensity of Soviet efforts to encourage and marshal Western European political opposition to the NATO deployment plan, a U.S. decision to terminate the MX program feeds European doubts over U.S. commitment to NATO's defense and, indeed, U.S. willingness to defend itself. Once those questions are raised, there is a danger Western European leaders may decide their long-term interests are best served by reaching some accommodation with Soviet goals in Europe. This would make the beginning of the end of the Western Alliance.

Our European allies are committed to support our efforts to secure fair, stable arms control agreements with the Soviet Union. Our ability to succeed in both the intermediate range nuclear force negotiations and the strategic arms reduction talks is linked inseparably to our ability to convince the Soviet Union that there is a reason for them to seek a fair agreement. Their negotiating positions are based on pure self-interest, not altruism. The Soviet negotiators will not surrender a military capability unless they receive something in return. If success of the NATO deployment plan is linked, as I believe it is, to the success of our MX deployment plan, then cancelling the MX program can wreck both our INF and START negotiating efforts. When this prospect is considered in light of our new, more realistic approaches to arms control, I am convinced we must proceed with the MX if our attempts to limit nuclear arms are to have any hope of success.

For these reasons, I am convinced a vote for MX is a vote for peace. MX is the motive force propelling both ourselves and the Soviet Union

toward a more stable strategic deterrent. It may also be the necessary precondition for successful European deployment of Pershing II and ground launched cruise missiles. Since this planned deployment is arguably the main reason the Soviet leaders are willing to negotiate with us in Geneva, MX deployment is the foundation upon which any hope for success in our arms control efforts must be based. We cannot afford to sacrifice our arms control efforts now.

ALFONSE M. D'AMATO.

ADDITIONAL VIEWS OF SENATOR ARLEN SPECTER

After discussions with the President, the Vice President, and General Scowcroft, study of the Scowcroft Commission's report including talks with Commission members, listening to extensive testimony in Senate hearings, and debating the subject with my Senate colleagues, I have decided to vote in favor of the Commission's plan for deployment of the MX missile.

I do so in support of the President's two-track policy of preparedness and arms reduction, and not because of confidence in the deployment of the MX missile itself. On the merits of the missile, I remain personally unconvinced of its reasonable survivability, its cost-effectiveness as compared to submarines with nuclear weapons, or its value as a signal of seriousness to the Soviets.

But there is no doubt in my mind, after yesterday's meeting with the President, that he very strongly believes the MX is indispensable for defense and arms reduction. At this stage on this issue, I believe that the Commander-in-Chief is entitled to the benefit of the doubt on differences in judgment between the executive and legislative branches.

In reaching my decision, I gave great weight to these factors:

1. The President's agreement to change the U.S. position in the Geneva arms reduction talks in light of the recommendations of the Scowcroft Commission;

2. The President's willingness to move ahead with a bipartisan advisory commission on disarmament which holds the promise to give U.S. policy continuity regardless of the party of the president in control; and

3. The President's movement toward acceptance of the Cohen-Nunn resolution on build-down.

There will be many more votes in the Senate on the life-cycle of the MX. We shall have a continuing opportunity to reassess the President's position on the MX as part of the overall plan for defense and arms reduction. Some Senators have suggested a moratorium on test flights of the MX if the Soviet Union will similarly suspend test flights on missiles with multiple warheads. That idea and others are worth exploring on moves toward arms reduction.

I applaud the President's demonstrated willingness to work in partnership with the Congress to build a consensus on this critical issue. In the executive-legislative partnership, he is the managing partner; and I am prepared to give significant weight to his managerial decisions as long as they realistically promote the critical objective of arms reduction.

ARLEN SPECTER.

ADDITIONAL VIEWS OF SENATOR JOHN C. STENNIS

I am pleased that the Appropriations Committee has endorsed this simple resolution to approve the expenditure and obligation of funds already appropriated for fiscal year 1983 for MX missile procurement and full-scale engineering development of a basing mode. This resolution will also permit the go-ahead of flight testing of MX.

Last year's continuing resolution prohibited obligation or expenditure of \$560,000,000 of R&D money for the basing mode pending specific approval by Congress. In addition, flight testing was prohibited until a basing mode was approved.

The Committee has endorsed moving ahead with the MX. If this resolution is approved on the Senate and House floors, the \$560,000,000 of fiscal year 1983 funds will be released and flight testing will be resumed.

It is time we move forward with this program and the Committee is correct in taking this first strong step.

The MX was first funded by Congress in 1973 (for fiscal year 1974) and has been funded each year for 10 years. Over \$6,700,000,000 has been appropriated so far on development. The last four Presidents (Nixon, Ford, Carter, and Reagan) have recommended MX. The last four Secretaries of Defense (Schlesinger, Rumsfeld, Brown, and Weinberger) have strongly argued for MX and continue to do so. The Joint Chiefs of Staff for 10 years have all recommended going forward with the MX. The chairmen of the JCS in that time were men from all three Services (Admiral Moorer (Navy), General Brown (Air Force), General Jones (Air Force), General Vessey (Army)). Last year, the Joint Chiefs who were against the dense pack basing mode, still recommended going forward with MX in Minuteman silos—the very proposal we have from the President and the Scowcroft Commission and which has been approved by the Committee. The Committee acted with prudence in heeding the advice of this long list of experienced and knowledgeable men who have been leaders of our country.

I believe that the President is sincerely trying to get an arms control agreement with the Russians. He has gone to the negotiating table in Geneva and has tabled a proposal. The Russians have responded, some with suggestions of their own. Last week, the Russian leaders said they would consider shifting more to counting warheads in an arms control agreement. On May 12, the President said in a letter to Senator Nunn that he was reviewing the U.S. negotiating proposal in order to modify it to reflect the Scowcroft Commission's views which he endorses. He further said he would work toward a new proposal to facilitate a START agreement that would incorporate some of the thinking of a

build-down proposal. So there is motion in this field. But the MX is a major tool in the negotiating kit of the President as we try to deal with the Russians on arms limitations. Removal of this tool would undermine the American position and chances of an agreement. The Committee has given a green light to the President to move forward on these negotiations and these new proposals by providing him the negotiating leverage and tools represented by the MX.

I am also pleased that the Committee has reaffirmed the triad. The United States has relied upon deterrence for its protection against nuclear war for over 35 years. The bulwark of this deterrence has been the triad—land-based ICBM's, sea-based SLBM's and bombers. The Russians know they cannot attack one part of this three-pronged spear without risking catastrophe from the other two groups. But if we let one part of the triad deteriorate, they could use all their power to overcome the other two parts. Further, the triad provides insurance against all parts of our strength having difficulties at the same time. Because of the uncertainty of war—particularly nuclear war—we simply cannot afford to take that risk.

Failure to move forward with the MX would be the beginning of deterioration of one part of the triad. This would weaken the bulwark of deterrence upon which we have successfully relied all these years. It could encourage the perception, if not the reality, that the Russians have gained a nuclear advantage. Deterrence is not and cannot be a bluff. There must be hard weaponry that the Russians can see together with firm and steady purpose that will convince them and make it absolutely plain to them that any attack on us would be utter folly. They should have no doubt that neither our weaponry nor our purpose would fail us in the event of attack upon us. Moving forward with the MX is a signal to them that both our weaponry and our purpose will be kept strong. The Committee action is a firm step in the direction of shoring up the triad and keeping deterrence strong.

Finally, America's allies look to us to counter Russian nuclear threats against them. Sometimes they may rely on our nuclear strength too much and fail to provide enough for their own conventional defense. But we are living in a real world where we must keep our allies for our own security interests. At this time, in the defense field we need to convince our allies to do more for their own conventional defense and to accept the deployment of new nuclear missiles in Europe if the Russians fail to agree to nuclear arms limitations in Europe. If we fail to move ahead with MX, our ability to convince our allies to take these important steps will be seriously undermined. This could lead to further trouble if they then fail to improve their defenses. We should not let this cycle of trouble begin. I think our allies should take encouragement from the Committee's action today.

JOHN C. STENNIS.

ADDITIONAL VIEWS OF SENATOR ROBERT C. BYRD

The MX basing mode proposed by the Reagan administration is troubling to me. It is a significantly weaker and more dangerous solution to land-based ICBM basing than could have been recommended. For well over \$16,000,000,000, it does not constitute the most militarily effective use of such an expensive asset.

The chief value of the recommendation to place 100 MX missiles in Minuteman III silos, is as a mechanism to move the superpowers toward more stable arms control arrangements and strategic force composition—to more survivable, less lucrative, and more effective second-strike weapons.

From a military point of view, 100 MX missiles will provide us with an addition of 1,000 hard-target kill or counterforce warheads earlier than could otherwise be made available. This is a measurable strengthening of the land-based prong of our strategic triad. It is, however, the arms control feature of the package of recommendations of the President's Commission on Strategic Forces which is the most attractive argument for the MX deployment. I believe additional assurances and mechanisms are needed to develop the momentum which will propel the United States and the Soviet Union to reach such understandings.

Immediate commitment by the administration to a vigorous program of engineering design, testing, and survivable deployment of a small single-warhead ICBM is an essential ingredient in this scenario.

I believe the Senate should remain responsibly and centrally involved in this process and support the development of mechanisms in the way of written Presidential assurances and in connection with funding of our strategic programs. I believe the assurances provided today by the President to the distinguished Senator from Georgia, Mr. Nunn, regarding his administration's commitment to arms control, to warhead counting, to the 2-for-1 build-down proposal and related matters are an important step in the right direction. Additional legislative conditions may also be desirable in the context of the fiscal year 1984 Defense authorization measure.

The administration has attempted to reduce the sting of putting these valuable targets in vulnerable Minuteman silos by changing its operational assumptions. The most recent testimony is that 30 percent of them would survive a Soviet barrage attack, whereas just last December Secretary Weinberger consistently maintained only 5 percent of our missile force would survive such an attack.

In addition, the testimony indicates we are being forced toward a "launch under attack" strategy, and away from our traditional retaliation strategy. This, of course, is understandable when it becomes clear we

cannot ride out an attack and respond effectively with a second-strike force of credible dimensions. This is becoming the reality of our land-based forces, but will not be a matter of concern regarding the other legs of our strategic triad for many years. Nevertheless, the MX recommendation is a more dangerous one than a more survivable system would constitute.

It is clearly a weaker military solution to our land-based posture than the system recommended by the previous administration. The previous plan for a mobile and deceptive basing mode, the multiple protective shelter system, would have presented the Soviets with an additional 4,600 aim points—a coverage the Soviets are not currently capable of. The current recommendation provides the Soviets with no additional targeting or operational burdens. It is disappointing that a national commission of distinguished Americans, including some highly respected former officials, have recommended anything less than the most militarily effective solution to the land-based missile problem. Secretary Weinberger has testified that the search for a survivable basing mode was an "illusion." It is unfortunate that despite President Reagan's recent statements that he is ready to "take a fresh look" at his "previous positions," the members of the Commission apparently felt they could not recommend anything which resembled a system the President campaigned against nearly 3 years ago.

Members of the Scowcroft Commission have freely admitted that their recommendations were political in nature. I believe they misconceived their role—their recommendation should have been the best based exclusively on national security and arms control considerations.

The arms control implications of the MX and Midgetman recommendations are the key factors with which the Senate has been wrestling, and which the Commission properly wrestled with as well. There is general agreement on their evaluation of the cause of instability in the current international environment—the very vigorous deployment of Soviet MIRVed missiles. Such missiles put our land-based ICBM's at risk. Were the United States to match such a land-based deployment we would put their ICBM's at risk in the same way. In this situation we would reach a most dangerous impasse—with each side's vast ICBM forces vulnerable to nearly complete destruction by a sudden attack. Hair-trigger or "launch on warning" policies might well be adopted. To avoid this, there is a consensus that we must somehow prod the Soviets to move with us toward changing the composition of our ICBM forces in the direction of less valuable, more dispersed, and more survivable forces. This is the so-called Midgetman solution.

It is not clear that deployment of 100 MX in Minuteman silos is a "lever" which realistically could be used to move the Soviets in this direction. Soviet ICBM's are their entry ticket to strategic and military parity with the United States. To move them in a new direction may well require us to negotiate limits on systems which they clearly regard as more threatening to them—such as cruise missiles, Pershing II missiles, and our projected Trident deployment with invulnerable counterforce D-5 missiles.

The arms control lever of this administration's MX proposal, is, therefore, in some doubt. It is for this reason that many Senators have attempted to engage in the difficult task of gaining assurance in the administration's efforts in securing fair arms limitation agreements with the Soviets. It is inherently the business of the executive branch to negotiate for the Nation on this matter. Congress is, to say the least, ill-equipped to either conduct negotiations or to dictate detailed negotiating strategy. But the sincerity of this administration in pursuing such equitable and verifiable agreements has been broadly questioned in the Senate. There is concern that the arms control umbrella used by the Scowcroft Commission in its MX recommendation is taken far more seriously by the members of the Commission than by officials of the current administration. It is, therefore, understandable that, nervous about the cost, military utility, and destabilizing effects of the MX recommendation, the Senate wishes to maintain a close involvement in the long-term development of arms control arrangements with the Soviet Union. To the extent possible, the MX should be used as a level to prod the Soviets. In addition, because of skepticism about the attitude taken by many in the administration on arms control generally, it is clear that approving the MX should be done in such a way as to prod the administration toward serious proposals in this field, and to periodically review its progress in a substantial way. This concern is the genesis of the many proposals which are now being made to condition the MX deployment on administration "assurances" concerning arms control, and to provide the missile force only on a piecemeal basis over the next several years.

Thus the central purpose of the MX deployment is to serve as a bridge to a more stable international environment. Although the recommendation is weaker and more destabilizing in the short run than it could be, I will support it for its value as such an arms control bridge.

ROBERT C. BYRD.

MINORITY VIEWS OF SENATORS ERNEST F. HOLLINGS AND DANIEL K. INOUE

Once more the Congress is being asked to approve a completely unacceptable basing mode for the MX. It has now reached the point of absurdity as the DOD, having depleted all previous basing options for "closing the window of vulnerability" and "enhancing our ICBM survivability," has reached back to the past and resurfaced the discredited notion of fixed-silo basing.

It is not necessary to restate all the criticisms about the MX in Minuteman silos. The misgivings come often and from every source—within the DOD and throughout the Congress. It is sufficient to state that the Senate Armed Services Committee totally rejected such a basing mode during its review of the fiscal year 1983 Defense budget request. It concluded at that time that no further work should be done in support of such a basing scheme. The chairman of the Armed Services Committee has stated that "by stuffing the MX's into fixed silos, we're creating just so many more sitting ducks for the Russians to shoot at * * *."

The question is posed repeatedly by those opponents of MX in Minuteman silos as to the justification of such actions. Faint replies by MX proponents of a need for arms control and a show of U.S. resolve are not enough.

We have very critical needs in both strategic and conventional force areas. We should be concerned about the priorities of each—rather than tilt in the direction of strategic. The defense budgets of the second half of the 1980's decade will not be large enough to accommodate the entire spectrum of the President's strategic modernization program and the conventional needs of our land forces, our air forces, and our naval forces. Beyond this must come an equal concern of having sufficient funds for all areas of readiness and personnel. Approving the MX only exacerbates our forthcoming defense budget dilemma.

Foregoing the MX is not a signal of abandonment of ICBM modernization or of the concept of the strategic triad. Coupled with cancellation of the MX should be a firm commitment for urgent and favorable congressional action on deployment of the Trident D-5 missile and a small, single warhead missile as rapidly as possible. Further, an upgrade should commence this fall on the current Minuteman III force to provide comparable range, accuracy, and hard-target capability as proposed for MX. According to the Air Force, such an improved Minuteman force can be available within the same timeframe suggested for MX deployment. The cost estimate for a comparable Minuteman force is \$12,800,000,000 versus the MX cost of over \$25,000,000,000 including

warhead. Charts illustrating these estimates provided by the Air Force follow by comments.

Three reasons have consistently been used in justifying MX: (1) system survivability; (2) an enhanced U.S. counterforce capability; (3) a means for an arms control agreement and a sign of U.S. resolve and will. Clearly, this MX proposal fails on all three accounts—particularly when considering other U.S. strategic modernization options.

The goal of fielding a more survivable ICBM force has been discarded by the administration in its current recommendation. This view is supported by a quote from the Senate Armed Services Committee's report (April 13, 1982) on the DOD fiscal year 1983 authorization bill in response to the administration's request for placing MX in Minuteman silos, "The Committee is also concerned that the possibility exists that strategic deterrence and crisis stability could be jeopardized, rather than enhanced by the deployment of high value, militarily important weapons in so small a number of relatively easily destroyed shelters * * *. No further work is to be undertaken in support of fixed-point silo basing of MX."

The MX provides no greater counterforce capability than an improved Minuteman III force of over 300 missiles with comparable range, accuracy, and hard-target capability—yet it would cost twice as much. Further, one Trident submarine with D-5 missiles would provide approximately 200 survivable warheads at a cost of roughly \$2,500,000,000. The MX—at \$25,000,000,000 and fewer survivable warheads after a Soviet first strike—is a ridiculous price for the capability.

On the issue of arms control and U.S. resolve and will, it is extremely doubtful that the Soviets will consider and MX a serious proposal by the United States. In the recent past, Defense Secretary Weinberger and other ardent supporters of the MX have stated—among many misgivings of MX in fixed silos—the following " * * * putting MX into existing silos would not answer two or three concerns * * * the location of these are well known and are not hardened sufficiently * * * to be of sufficient strategic value to count as a strategic improvement of our forces" and " * * * unless the Soviets are convinced that it (MX) can survive an attack * * * the Russians will have no incentive to start serious arms control talks."

It is fallacious to state that MX deployment is a cornerstone of the U.S. resolve and will to maintain an effective deterrent capability. Our entire modernization effort is a forceful illustration of U.S. will. There is an abundance of will and resolve in the Trident with D-5, a new single warhead missile, B-1 and stealth bombers, Pershing II and GLCM, ALCM, and stealth cruise missiles, strategic C3, research and development on a BMD system and a significantly improved Minuteman III force.

The MX in vulnerable basing mode does not deserve our support. Savings from MX cancellation should be used for higher priority defense needs—the strategic modernization programs discussed above—and those critical requirements of our conventional forces and for personnel and readiness items. Unless we address the balance of priorities

between strategic and conventional forces, our options may be severely limited in future years.

MX PROGRAM COSTS, CURRENT AND COMMISSION RECOMMENDATION

[Then-year dollars, in millions]

	RDT&E (3600)	Procurement (3020)	Milcon (3300)	Total	Missile buy
President's current program:					
Fiscal year:					
1983	2,506	¹ 988	17	3,511	
1984	3,378	2,868	449	6,695	27
1985	2,901	4,007	640	7,548	37
1986	1,676	4,215	700	6,591	48
1987	729	3,833	1,344	5,906	48
1988	55	2,327	1,028	3,410	48
1989	0	421	0	421	15
Total	11,245	18,659	4,178	34,082	228
Commission's recommendation:					
Fiscal year:					
1983	2,506	¹ 0	17	2,523	
1984	2,034	2,536	72	4,642	
1985	1,676	3,476	141	5,293	
1986	897	3,042	98	4,037	
1987	410	2,878	78	3,366	
1988	0	2,130	71	2,201	
1989	0	661	0	661	
Total	7,523	14,723	477	22,723	

¹Congress did not approve \$988 of fiscal year 1983 procurement funding, pending basing review. With Commission's recommendation, no fiscal year 1983 supplemental is required.

MINUTEMAN UPGRADE

[Dollars in millions]

	RD&E (\$TY)	Procurement (\$TY)	Milcon (\$TY)	Total (\$TY)
Fiscal year:				
1983	634.25			634.25
1984	733.2	1,850.58	11.79	2,595.57
1985	579.67	1,672.59	24.68	2,276.94
1986	346.36	1,520.55	25.8	1,892.71
1987	206.88	1,403.15	26.96	1,636.99
1988		1,391.07		1,391.07
1989		1,406.75		1,406.75
1990		928.03		928.03
1991		37.06		37.06
1992		39.2		39.2
Total	2,500.36	10,248.98	89.23	12,838.57

Note A—Forty-eight months initial operational capability (IOC) after go-ahead; 24 months later for full operational capability (FOC). Thus, July 1983 go-ahead equals July 1987 IOC; July 1989 FOC.

Note B—Estimates provide for 350 Minuteman III missiles with AIRS guidance and MK 12A warhead plus spares.

There is a multitude of reasons why MX in fixed-silos is the wrong idea. The following statements and quotes detail very specifically why the current MX proposal has been rejected and should be at this time.

In October 1981, President Reagan announced his intention to base between 18 and 100 MX missiles in superhardened Titan and Minuteman silos on a temporary basis while proceeding with research on 3 other basing modes. The plan drew criticism from many quarters. Within months the superhardening plan was junked and the idea of using Titan silos was dropped; by the middle of the following year, the whole plan had been quietly shelved.

On December 2, 1981, the Senate approved by a 90-4 margin an amendment to the fiscal year 1982 Defense appropriations bill sponsored by Senators Cohen, Quayle, Mattingly, Rudman, and Nunn that redirected the use of MX research and development funds, \$354 million, away from the plan of deploying the MX in existing hardened Minuteman and Titan silos toward a more permanent solution. The purpose of the amendment, according to its sponsors, was to "send a strong signal to DOD" that deployment of the MX in Minuteman silos was the "wrong direction to go in."

In March 1982, the Senate Armed Services Committee unanimously refused to approve the first \$1.5 billion for MX missile procurement on the grounds that interim deployment in Minuteman silos was unacceptable. The Committee used very strong language to criticize the idea of placing the MX in Minuteman silos. The full Senate went along with that decision without dissent, although a later compromise with the House Armed Services Committee restored the funds.

Below is a series of statements by Reagan administration officials, conservative Senators and Representatives, ex-Government officials and others, who at various times strongly criticized the idea of placing the MX in Minuteman or Titan silos.

These statements should be examined in light of the latest Reagan administration MX plan—which is, in fact, a return to the discarded October 1981 proposal for an interim MX deployment in existing silos.

Senator John Tower, November 2, 1981.—By stuffing the MX's into fixed silos, we're creating just so many more sitting ducks for the Russians to shoot at. . . . True, the MX missile itself will be more powerful, more accurate—and we need that kind of weapon. But it's of little use to us unless the Soviets are convinced that it can survive an attack. Without that, the Russians will have no incentive to start serious arms control talks.

Caspar Weinberger, Secretary of Defense, January 6, 1981.—I would feel that simply putting it [the MX] into existing silos would not answer two or three of the concerns that I have; namely, that [the location of] these are well known and are not hardened sufficiently, nor could they be, to be of sufficient strategic value to count as a strategic improvement of our forces.

Senator Henry Jackson, October 5, 1981.—My main criticism—and I criticized the Carter administration—is that in the 1980's Minuteman and Titan are vulnerable in those silos. I think you and others properly have criticized that deployment. Then after 8 months we come back here; we have looked at all these other things supposedly, but it took 8 months to do that, and we end up with what we have now. . . . We have given the Soviets a better target to shoot at.

Senate Armed Services Committee report on the fiscal year 1983 Defense authorization bill, April 13, 1982.—The planned interim basing of MX does not redress the problem of the vulnerability of the land-based ICBM force. . . . The \$715 million requested for research and development on interim basing of the MX is denied. No further work is to be undertaken in support of fixed-point silo basing of MX.

Senator William Cohen, December 16, 1982.—The reason Sam Nunn and I proposed our amendment a year ago was that we were frustrated with what we perceived to be an intention to move forward with an interim basing mode—placing the initial missiles in superhardened silos—that was not survivable, but was costly and probably in violation of the terms of SALT I and II. We specified that the MX funds could not be used for that purpose. . . .

Representative Melvin Price, October 6, 1981.—What is to be gained by deploying just 36 MX missiles in existing silos? If 4,600 silos of the MPS mode would be too vulnerable to proliferation of Soviet ICBM's, how are 36 or even 100 MX's in fixed silos to be more survivable? What technical knowledge do we have now as to the feasibility of deep silos basing?

William Perry, former Undersecretary of Defense, November 13, 1981.—My concern is that if we had this very accurate, very threatening missile in unprotected silos, and if they do not go to a survivable system themselves . . . that simply increases the hair trigger . . . on both sides.

I agonized over that and said, on balance, I would not go ahead with that [MX in silos] because I don't believe we will come up with a survivable basing mode that is acceptable.

Since I am pessimistic that we will get a basing mode that is both survivable and acceptable, I am opposed to putting a weapon that lethal in an unsurvivable mode, for reasons I have described in terms of hair triggering the alert.

Senate Strategic and Theater Nuclear Forces Subcommittee report on fiscal year 1983 Defense authorization bill, March 24, 1982 (endorsed by Senators Thurmond, Goldwater, Cohen, Quayle, Jackson, Nunn, Hart, and Exon).—The number of additional warheads that would survive an attack upon MX missiles so deployed [in Minuteman silos] does not appear to justify the costs—assessed at \$2.6 billion over the next 5 years—associated with this basing scheme.

The Committee also is concerned that the possibility may exist that strategic deterrence and crisis stability could be jeopardized, rather than enhanced, by the deployment of high-value, militarily important weapons in so small a number of relatively easily destroyed shelters.

Gen. Lew Allen, Chief of Staff, U.S. Air Force, January 29, 1981.— . . . an essential feature of the MX deployment is that the basing mode be survivable. One does not obtain that through placing it in Minuteman silos. Therefore, I do not favor such a deployment.

Dr. James P. Wade, Principal Deputy Undersecretary of Defense, October 27, 1981.— . . . if you focus just on the survivability aspect of the value gained by placing the MX in a hardened silo . . . the value is at best marginal.

Harold Brown, former Secretary of Defense, November 13, 1981.—The October 2 decision adopts an admittedly very vulnerable basing system, and indicates an intention to continue to explore other possibilities for some time in the future. . . . There is talk of further hardening of existing silos for a much-truncated MX force, but since the MX will not be available until 1986, that further hardening, if it is at all feasible, will not be available before the Soviets can install a new generation of guidance systems. The Soviets, using technology that they have already developed, will surely be able by that time to improve the accuracy of their ICBM's further, so that in the case of a nuclear war the hardened MX silos will find themselves in the fireball and in the crater left by the nuclear

explosion of Soviet warheads; the silos would not survive such an experience.

Senator Sam Nunn, December 2, 1981.—The experts who have testified before the Armed Services Committee, and I am sure other committees have had similar testimony, agree that the Soviets today have the combination of yield and accuracy necessary to overcome the levels of hardness contemplated. The MX simply is not survivable in existing silos, whether they are hardened or unhardened. This fact is confirmed by every expert witness who has testified, and it includes also not only governmental witnesses but also knowledgeable outside witnesses, including the Air Force and our intelligence community.

Representative William Dickinson, October 6, 1981.—From my understanding of the physics of the problem, it is almost impossible to guarantee a respectable level of survivability with missiles encased in a silo of ICBM's. In other words, we are trying to address our so-called window of vulnerability, and I am concerned that we are not closing that window of vulnerability but simply pulling down the shade.

Senator William Cohen, December 2, 1981.—If you believe in the window of vulnerability, then putting those missiles [the MX] in unprotected, immobile silos is a very dangerous move. It's inviting the very kind of Russian strike that we fear. . . .

It also, I think, can be agreed upon that the hardening of missile silos, as has been recommended by the administration, on an interim basis, does very little to improve missile survivability, and that such hardening does not reduce the threat of nuclear conflict or strengthen nuclear deterrence. . . .

I think inherently in any decision about having fixed silos, we must deal with the question as to whether or not, by putting these new, bigger, more destructive missiles in a fixed mode we thereby lower that threshold and make them much more targetable, much more attractive for the Soviets to attack in a moment of strategic error, miscalculation, and madness.

Dr. Richard DeLauer, Undersecretary of Defense for Research and Engineering, March 11, 1982.—The reason that I did not relate interim basing [of the MX missile in Minuteman silos] to the survivability problem is that the resulting survivability will be no better than it is now.

Caspar Weinberger, Secretary of Defense, October 5, 1981.—I don't think they [Minuteman silos] can be hardened enough on a permanent basis to warrant putting [MX missiles] in fixed and known silos. I think they can be hardened enough to give strength for a few years.

Lt. Gen. Kelly Burke, Deputy Chief of Staff, U.S. Air Force, March 15, 1982.— . . . I testified earlier that the Air Force had recommended, irrespective of congressional action, that super-hardening was not worth the cost. It had some value. It also had a very big price tag and our recommendation was not to do that.

Senator Pete Domenici, December 3, 1981.—By placing our most advanced strategic weapon—the MX—in silos which belong to an earlier era of nuclear technology, the President has reduced—perhaps even eliminated—the usefulness of the MX. Hardened existing silos would make a nice target for Soviet planners; it might even encourage them to contemplate a pre-emptive attack because the payoff—America's MX missile—would be so attractive.

Senator Dan Quayle, December 3, 1981.—The primary justification for a new land-based missile must be that it is relatively invulnerable to a Soviet first strike. If it is not, it will lose its deterrent value, which is the position we are facing with our Minuteman missiles.

It continues to distress me that, despite years of discussion and debate, we still lack an acceptable basing mode for the MX.

Senator James Exon, December 3, 1981.—Probably the most serious of all is the ill-conceived placing of the 10-warhead MX missile in place of the 3-warhead Minuteman III missile or the single-warhead Minuteman II and Titan missiles which would contribute to the unstable launch-on-warning doctrine we should instead be trying to avoid. It makes no sense to this Senator to place a more valuable weapon such as the MX in silos which are becoming more vulnerable with each passing month. During time of tension or warning of actual Soviet missile launch there will be a greater tendency to use them or lose them rather than having our land-based missiles attempt to ride out an attack and then retaliate. This situation does not contribute to crisis stability—one of the administration's own properly stated goals.

General David Jones, then Joint Chief of Staff, October 5, 1981.—In my own view, I consider the MX in a very survivable mode to be extremely important to the security of the Nation. I remain to be convinced there is a survivable mode other than MPS. So, if forced with the difficult choice, B-1, ATB, and MX, I would put MX last under the current program slice.

Senator Sam Nunn, December 2, 1981.—There is considerable doubt in my mind about the wisdom of proceeding with an MX program at all if we cannot, at some point, come up with a reasonable opportunity for survivability of the missile.

Conference report on the fiscal year 1977 Department of Defense authorization bill, June 1976.—The rationale behind the development of a new missile system [MX] is to provide a land-based survivable strategic force. The development of an alternate basing mode as opposed to a fixed or silo-based mode is the key element in insuring this survivable force. The conferees are in agreement that providing a survivable system should not be constrained for silo basing; that none of this program's funds shall be expended in fixed or silo basing for MX; and that none of the program reduction shall reduce the Department's proposed investigations of mobile deployment.

Senator John Warner, March 24, 1982.—The MX would be too vulnerable to a Soviet first strike under that arrangement [MX in existing silos] and the subcommittee saw no point in building the missiles until the permanent basing decision was made.

Senator John Tower, October 2, 1981.—I am enormously skeptical to the point of feeling that this plan [MX in Minuteman silos] doesn't give us enough added capability for the money involved and leaves us with a highly vulnerable land-based system.

Senator Mark Andrews, December 2, 1981.—If we spend over \$300 million to harden a bunch of silos to put a 10-warhead missile in a fixed point because we are afraid that the Russians are targeting 3-warhead missiles in a fixed point, all we do is step up the opportunity for them to take out 10 warheads at a time instead of 3 warheads at a time.

Senator Alan Dixon, December 2, 1981.—I support the MX missile. I think hardening of the silos in permanent basing modes, as presently contemplated, invites disaster and is a terrible mistake.

Adm. Stansfield Turner, former Director of the Central Intelligence Agency.—For several years now, the immediate problem with the MX has been how to base it. Placed in existing silos, it would be vulnerable to surprise attack by the Soviet Union's beefed-up strategic forces—just as vulnerable as our present generation of land-based missiles.

General Ellis, then Commander-in-Chief of the Strategic Air Command, February 18, 1981.—We must correct our vulnerability by deploying the MX in a mobile basing configuration. . . .

Senator, if we had the mobility in the Minuteman force that we are building into the MX force, we wouldn't need an MX force.

ERNEST F. HOLLINGS.
DANIEL K. INOUE.

ADDITIONAL VIEWS OF SENATOR LAWTON CHILES

My vote in favor of the resolution is a qualified endorsement of the MX development program. Further, the Committee decision should not be construed as a blanket endorsement of the MX. It is a decision—a very important one—to recommend that Congress release fiscal year 1983 funds for basing development and allow missile procurement to begin. There are many milestones to pass in both the MX development program and congressional approval. Issues of technical progress, program cost, the strategic balance, and arms control developments will be considered carefully at each decision point.

The questions of military utility and arms control implications of this MX decision were reviewed by the Committee and in my own deliberations. The recommendations of the President's Commission on Strategic Forces played an instrumental role in this, and I support fully their conclusion that attention to arms control and strategic modernization are essential to a strategy of protecting our national security at reduced levels of weapons. I accepted with regret the assessment of the Commission that an invulnerable basing mode for the MX was not feasible; and agreed that, consequently, modernization of our ICBM force is essential while research and development on the small, mobile missile continues. In considering the two alternatives for near term ICBM modernization—MX deployments or upgrading the guidance system on the Minuteman III—I concluded that while the cost of the Minuteman upgrade was less, it would take longer to complete than the MX program. And, when considerations of national resolve and arms control leverage are taken into account, a decision to proceed with this stage of the MX development program is warranted.

The Scowcroft Commission report opened a new and positive chapter in our national commitment to achieving progress in arms control. The letter to the President by Senators Nunn, Cohen, and Percy not only served to bring the administration clearly on board, but also added new ideas and impetus to the formulation of our arms control strategy. I welcome the President's commitment to the Commission recommendations and the build-down concept in our arms control strategy, and I expect the administration expeditiously to incorporate these commitments in our START proposals. Fulfillment of the President's commitment to a bipartisan approach on arms control is the best way of assuring that same bipartisan support for our strategic modernization programs.

From my position on the Budget Committee, I would add a note of caution. While the Senate has in some manner endorsed each element of the administration's strategic modernization program—land, sea, and

air—these are only some of the administration's big ticket and little ticket procurement items. The bills for these nuclear and conventional items will be coming due at roughly the same time, what we now so comfortably call the out-years. I, for one, am not comfortable with the developing situation where the strategic programs will require an increasing percentage of the defense budget; and overall procurement, if unchecked by congressional action, will once again crowd out readiness. Real defense spending increases on the order of the President's 10-percent request are simply not economically or militarily justifiable. With continued bipartisan support in the budget process we can assure a moderate and sustained growth in defense spending. But at spending levels substantially below the administration request in the out-years, the procurement problem looms even more severe.

Finally, I urge the administration, with bipartisan congressional support, to work tirelessly in arms control negotiations to assure that, by 1986, the MX bargaining chip does not have to be played. That after all, is our goal. Our signal to the Soviet leadership should be unambiguous—the United States is committed to strategic modernization as necessary, and to arms reductions to the full extent that the Soviets will join us in partnership.

LAWTON CHILES.

ADDITIONAL VIEWS OF SENATOR WALTER D. HUDDLESTON

I voted present during Committee consideration of S. Con. Res. 26 as a protest of this administration's arms control policy and as a protest to the way this administration has handled its MX missile. Thus far they have given us neither an arms control agreement nor a solid plan for survivability basing the MX.

The record of the current administration on arms control is abysmal. It actively opposes ratification of the SALT treaty. It pursues the rhetoric of arms control without the realism which has been necessary for the conclusion of agreements for more than 20 years. It puts on the table proposals which sound the call for arms reduction yet have little chance of leading to fruitful negotiations and an agreement.

On the MX itself, the administration has floundered for 2½ years. It rejected the MPS basing plan proposal by President Carter for political reasons and has been unable to find a substitute. Now it has given up and simply says it put the MX in nonsurvivable Minuteman silos.

Fortunately, the recommendations of the so-called Scrowcroft Commission have helped to put us back on the correct path. The Commission has told us, for the moment, to look at the asymmetries of the nuclear equation and, for the longer term, to seek a policy based on more stabilizing systems. I applaud this approach.

In my opinion, however, 100 MX missiles placed in a vulnerable basing mode at a cost of \$16,000,000,000 makes only a very small contribution to our military power. In response to a question I asked during Committee hearings, Secretary of Defense Weinberger indicated that such a deployment was not necessary for parity. Some have said that it might be useful under certain scenarios. But, observers have also noted that it sets the stage for a move from a retaliatory to a war fighting strategy and that it is destabilizing in that it presents a tempting target, with 10 warheads in a vulnerable silo. In other words, it is militarily of limited value, but it costs a lot. Perhaps more importantly, it is destabilizing in that it presents a particularly inviting target for Soviet missiles.

The MX proposal thus must be justified primarily as "bargaining leverage," as a trading item, and an expensive one at that. The question is whether flight testing, scheduled to begin in July, and production are necessary.

I have joined those urging the President to seek a mutual and verifiable freeze on nuclear weapons. Indeed, I see even the potential for

flight testing and production of the MX as providing incentive for the Soviet Union to consider such a proposal.

Likewise, the potential for flight testing and production might be used to seek a moratorium on further flight tests of MIRVed ICBM's by both sides and to move us toward a single warhead system as proposed by the Scrowcroft Commission. I have offered a proposal to accomplish this objective.

Thus, the MX and the potential for MX have negotiating value, but value only if used in quest of legitimate arms control. Because of that, I would prefer not to deny a President his "bargaining leverage." Nevertheless, the nature of the proposed deployment of 100 MX missiles in Minuteman silos and the lack of realistic activity to date on arms control militate against approval without satisfactory linkage to a more realistic arms control policy.

We can make no greater contribution to our own security than to move toward a more stable nuclear situation and nuclear arms reductions. There is insufficient justification for the MX in Minuteman silos—indeed, it is potentially dangerous—unless it is used to put us squarely on that course. There must be a firm commitment to this course.

We have given ourselves limited legislative options in structuring S. Con. Res. 26 and the procedures for its consideration. The defense authorization bill will be before us shortly, and we must use that vehicle to construct a nuclear strategy in which arms control plays the vital role that it should.

WALTER D. HUDDLESTON.

ADDITIONAL VIEWS OF SENATOR QUENTIN N. BURDICK

This Committee heard several days of testimony on the Scowcroft Commission's report, with particular emphasis on its recommendation to deploy 100 MX missiles in Minuteman silos.

There is much to admire in this report. It breaks new ground in our thinking about strategic force modernization and arms control policy, and it presents the Congress with challenging questions about defense policy that will be debated for many months.

What the Commission does not offer us, however, is a convincing case for deployment of the MX in Minuteman silos.

This deployment scheme does not resolve any of the problems associated with the vulnerability of our Minuteman system. The MX will be just as vulnerable in its silo as is the Minuteman. A 1982 Air Force report puts it quite plainly, "The Soviets could attack the MX in Minuteman silos in the same manner as they can our present Minuteman force and, consequently, the MX missile would be at risk."

Silo basing of the MX not only leaves unresolved the question of land-based ICBM vulnerability, but, as a home for the 10-warhead MX, the silos become an even more attractive target for the Soviets.

MX deployment does not add to our national security, and it is not likely to bring us progress on the arms control front. Much has been made of the bargaining chip theory, and the need to find inducements for the Soviets to negotiate seriously on arms control. But, a vulnerable missile system that does not significantly improve our strategic position does not strike me as much of an inducement. In fact, we have heard persuasive testimony that the Soviets' response to our decision to deploy will not lead to serious arms control negotiations, but rather to Soviet deployment of their version of the MX.

Mutual deployment of a MX-type missile is not only destabilizing, but it will pull us further away from the Commission's recommendation that we move in the direction of small, single-warhead missiles. In carefully outlining the advantages of developing this kind of missile, the Commission in effect makes the case for abandoning the MX.

I think it is time to admit that the MX cannot be justified on the grounds of national security or arms control, and that MX funding should be dropped from the defense budget.

QUENTIN N. BURDICK.

MINORITY VIEWS OF SENATOR PATRICK J. LEAHY

I strongly disagree with the action taken by the Committee today in approving S. Con. Res. 26 to permit the expenditure of funds for MX procurement and basing. Narrowly construed, the majority voted to release funds for MX basing fenced in the fiscal year 1983 continuing resolution. However, this resolution and the Committee's action will inevitably be interpreted as approval of President Reagan's plan, based on the Scowcroft report, to deploy 100 MX missiles in Minuteman silos. The Air Force is certainly going to see this resolution as enabling it to begin production of the missile.

This miscasts the issue which should be before this Committee. The President's MX basing recommendation is only one of a number contained in the excellent Report of the Scowcroft Commission on Strategic Forces. I emphatically do not wish my vote in opposition to S. Con. Res. 26 to be taken to mean I oppose anything more than the illogical, unnecessary and wasteful plan to deploy 100 MX missiles in vulnerable Minuteman silos. Save for its contradictory and politically driven conclusions on the MX, I favor and can support much of the Commission's program for strategic modernization and arms control.

As the Scowcroft report emphasizes, the United States has a vigorous strategic modernization program underway encompassing new heavy bombers, cruise missiles, submarines, and submarine-launched ballistic missiles. The report properly urges pressing ahead with these. In addition, it recommends research and development of a small, single warhead ICBM for the 1990's which would be more survivable and less threatening. At the same time, it spells out a fresh new approach to strategic arms control designed to strengthen stability and lower the risks of nuclear war.

I believe the Committee should have disapproved S. Con. Res. 26, and gone beyond the narrow issue of basing MX in Minuteman silos. The Committee should be seriously considering the entire range of possibilities afforded by the Scowcroft Report. We need to find the means to act on the entire strategic situation, including the tragically stalemated arms control process, through the vehicle of the Scowcroft Commission.

Had the Committee taken this course, members would have had an opportunity to propose a coherent alternative strategic modernization and arms control package, drawing on the acceptable portions of the Scowcroft Report. I believe the elements of a firm bipartisan consensus on strategic policy—something this country has not had for many years, and which it urgently needs—exist within the Scowcroft report. The possibility of forging this consensus still remains: Discussion, debate,

and decisions will occur in other places. The issues will come back before us. Regrettably, however, the action taken by the Committee today will not, in my judgment, enhance the prospects for this new consensus.

PATRICK J. LEAHY.

MINORITY VIEWS OF SENATOR JIM SASSER

For three decades strategic nuclear deterrence depended on the United States ability to survive a first strike by the Soviet Union and then retaliate with the remaining nuclear force. A survivable second-strike capability is, therefore, critical to maintaining deterrence and strategic stability.

As Soviet technology improved and new accurate missiles were seen to threaten U.S. land-based ICBM's, concern grew over whether the United States would be able to maintain a credible second-strike capability. In response to the perceived Soviet threat, this Nation began development of the MX as the next generation of land-based missiles. For two administrations, the MX has been viewed as a missile which could place Soviet military hardened targets at risk in a second strike. The MX has always been justified on the basis that it provides a survivable retaliatory force.

The placement of 100 MX missiles in existing Minuteman silos does not provide a survivable basing mode for this new weapons system. Such a basing mode renders the MX as theoretically vulnerable as the existing Minuteman force. MX in Minuteman silos does not assure a survivable hard-target retaliatory capability unless the MX is launched before its silos are attacked. A vulnerable MX, therefore, distorts the historical policy of deterrence and implies a policy of launch on warning or launch under attack. Only by launching under attack could the United States be assured of the ability to strike back at the Soviet Union with our land-based nuclear force. Such a policy would place a hair-trigger on U.S. nuclear forces and add a new dimension to nuclear arms strategy. A launch under attack policy substantially distorts nuclear deterrence and adds new risks of accidental or unintentional nuclear war.

The MX can lead to nuclear stability only if it can be deployed in a survivable basing mode. I have supported research and development on the MX, and I would vote for a basing mode which assured its survivability. I cannot support, however, MX in Minuteman silos because of its vulnerability to attack and its subsequent destabilizing effect on nuclear deterrence.

JIM SASSER.

ADDITIONAL VIEWS OF SENATOR DENNIS DeCONCINI

It is with some reluctance that I cast my vote for S. Con. Res. 26, the MX missile basing mode approval resolution. I have always supported the production of the MX missile; indeed, I am a strong supporter of the strategic modernization program pursued by both the Carter and Reagan administrations. But, I have supported the MX missile program as a feature of the strategic modernization program because it was to be deployed in a survivable manner. Specifically, I supported the MX missile's deployment in the multiple protective shelter basing mode (MPS), and I believe that when President Reagan took office, he had sufficient support in Congress to allow him to base the missile in the MPS mode. I continue to support such deployment. Indeed, the Scowcroft report is very supportive of the MPS mode, particularly if its arms control recommendations became a part of a United States/Soviet agreement.

During testimony before the Committee and in various other statements, the Reagan administration, using the Scowcroft report as a pretext, argued that survivability is no longer the primary concern, that MX can deter the Soviets and add to our strategic might, even though it will not be able to survive a first-strike attack. Secretary Weinberger was quite evasive about the specific strengths that a vulnerably-based MX would bring us, and instead, suggested that advances in silo hardening—improvements that were not really a part of the Scowcroft report—might make the missile less vulnerable than the experts believe.

The administration abandoned its arguments for a survivable MX, but did not replace these arguments with any other rationale which would make a vulnerable MX acceptable. The administration argued that we need the MX to increase our ability to destroy hardened Soviet targets, yet the only chances we will have to use this capability with Minuteman MX basing is if we adopt a first-strike or launch-on-warning policy.

In my view, after the Scowcroft Commission report was released, the administration had two alternatives in terms of utilizing the MX in a way that enhances the security of the United States. Either it could go back to the drawing board and come up with a plan such as the MPS system which will provide a significant degree of survivability for the MX, or it could accept in full the recommendations of the Scowcroft Commission report by fitting the deployment of the MX missile into a framework designed to integrate strategic force modernization with arms control in order to move both in the direction of stability. The chances of another basing mode reassessment were slim, at best. Therefore, I urged the administration to take a much closer look at the totality of the Scowcroft Commission report.

True, the report advocates basing the MX in a vulnerable manner. However, judging from the administration witnesses who appeared before this committee, it would seem that the administration did not read the Scowcroft report beyond the point where it made this recommendation. The message I read from the report is that short-term ICBM vulnerability is worthwhile only if we can achieve arms control agreements which enhance stability, both from the U.S. perspective and from the perspective of the Soviet Union. Prior to the very day on which we were to vote on the resolution of approval, I had seen no evidence that the administration recognized the need for attaining strategic stability through arms control, and I had seen no evidence that the administration accepts the logic of the Commission report that such stability may actually be attainable in a United States/Soviet arms control agreement if the administration modifies its negotiation proposals to emphasize, for example, the need to reduce warheads rather than launchers.

I have now received a lengthy letter from the President expressing wholehearted agreement "with the essential theme of the Scowcroft Commission approach arms control: the attainment of stability at the lowest possible level of forces." In this letter, President Reagan also affirms that, "The Scowcroft Commission's recommendations on modernization and arms control are integrally related." Although I can only be sure that the President accepts the Scowcroft report in full by seeing concrete arms control proposals incorporating the Scowcroft recommendations, I believe that in this instance I must take him at his word. I voted in favor of S. Con. Res. 26 but I will keep the President's assurances very much in mind during each and every vote that we cast which will impact on our arms control negotiations position. I hope very much that the administration has, indeed, changed its perspective on the arms control issue and accepted the need to pursue stability through arms control. Until it does, I do not think that we can attain an arms control agreement which both protects U.S. interests and helps to call a halt to the nuclear arms race.

DENNIS DeCONCINI.

MINORITY VIEWS OF SENATOR DALE BUMPERS

Many Congressmen appear willing to support the latest plan to deploy the MX missile in Minuteman silos because they believe it is the best means to force the Reagan administration into serious and substantive nuclear arms negotiations. They admit that the new missile would be every bit as vulnerable to Soviet attack as existing Minuteman missiles. But these reluctant supporters argue that the MX should be approved because it is a necessary interim step to building the new Midgetman missile, and because approval of the MX would send a signal to the Soviet Union of a bipartisan consensus in support of both strategic modernization and arms control. Unfortunately, these assumptions and others are based on leaps of faith that threaten to turn reason on its head.

Leap of Faith No. 1: The MX is a necessary interim step before we develop the Midgetman missile. Most people agree that the U.S. should consider developing a small, single-warhead missile such as the proposed Midgetman, because our land-based nuclear arsenal would be less tempting to the enemy if our warheads were dispersed on a large number of single-warhead missiles. MX proponents argue that during the decade it will take to develop Midgetman, the MX should be deployed as an interim step to replace the aging Minuteman missiles. The problem is that once the MX is built, the Midgetman, which is clearly a lower priority program than the MX for the Air Force, may never be built. Future administrations and future Pentagon leaders may or may not decide to build Midgetman in the late 1980's. MX, rather than leading to Midgetman, may crowd it out.

Leap of Faith No. 2: By building the MX, we will force the Soviet Union to agree to deep reductions in its strategic arsenal. While it is conceivable the Soviets would respond positively to a U.S. approach that combined deployment of MX with a call for cuts in strategic arms, it is at least equally likely that they would respond by producing a new, large MIRVed missile. Indeed, such a new Soviet missile is already well along in its development and testing. Administration officials have made it abundantly clear that we will not bargain away our 100 MX missiles as part of any agreement, so it is difficult to see how a non-negotiable item on our side will produce tangible concessions on the Soviet side.

Leap of Faith No. 3: A corollary argument is that the MX would put the Soviet force at greater risk, and therefore force the Soviets toward a more survivable mobile missile. This would be a positive development for us because the more vulnerable the missiles are on either side, the greater the chances are for an accidental nuclear exchange. But there is

little in Soviet history to suggest that they will scrap the large investment they've made in their existing heavy missile force in response to any new U.S. deployments. It is just as plausible that the Soviets, recognizing the MX as a first strike weapon, would go to an even more hair-trigger, launch-on-warning concept to protect their land-based missile force while building new MIRVed missiles.

Leap of Faith No. 4: Congress can keep the administration on a short leash by authorizing a small number of MX missiles. The argument here is that Congress can force the administration to engage in serious arms control by authorizing only a portion of the total 100 missiles requested. But history indicates two problems with this. First, Congress is a collection of 535 different wills and is, therefore, in no position to keep any administration on a short leash. Recall that former Secretary of Defense Harold Brown promised in 1978 that if Congress approved the sale of "stripped down" F-15's to Saudi Arabia, the administration would never come back asking for enhancement to the F-15 or AWACS aircraft. Yet this is exactly what a new administration did only 3 years later. In the second place, once production of a new weapon system is begun, it is extremely difficult to turn it off. A coalition of political, military, business, and labor interests will resist any effort to stop production. Congress can make a show of limiting initial MX procurement to 35 or 50 or 75, but it is likely that 100 or more will actually be produced and deployed. After all, proponents will argue, the startup cost of the MX would be relatively high; the cost of additional MX missiles would be relatively low.

Leap of Faith No. 5: Building the MX and Midgetman would not violate previous arms control agreements. Developing two new U.S. missiles would clearly violate existing SALT constraints. The future of Midgetman itself is clouded by whether a deployment mode can be found that is both survivable and verifiable. And there is likely to be a future effort to develop and deploy ballistic missile defense systems to protect the MX field, a move that would almost certainly require amendment or abrogation of the 1972 ABM treaty.

Leap of Faith No. 6: MX is the price we must pay for rebuilding a bipartisan consensus for arms control. The MX is an issue that divides Congress and the American people as perhaps no other weapon system has. The MX moves us in the opposite direction desired by those who would bring us together. The fact is that there was a fairly strong bipartisan consensus for arms control that extended through Republican and Democratic administrations from Eisenhower to Kennedy to Johnson to Nixon to Ford to Carter. It was the extreme right represented by candidate Ronald Reagan in the seventies and by President Ronald Reagan in the late eighties that broke the consensus by seeking to abandon existing arms agreements and goals. There is no evidence to suggest that even if Congress accepted all the Scowcroft Commission recommendations, the administration would suddenly develop enthusiasm for nuclear arms agreements. An administration determined to achieve arms control does not need to be pushed into it, and an administration hostile to arms control cannot be forced into it. It should also be pointed

out that while the Scowcroft Commission report embodied a bipartisan consensus, it was a consensus only among those who were committed in advance to finding a way to save the MX.

Leap of Faith No. 7: It is impossible to separate the MX from the elements of the Scowcroft Commission package. Notwithstanding the attempt to mold a new "Holy Trinity"—MX, Midgetman, and arms control—Congress will vote up or down on a simple resolution approving the proposed plan to deploy the MX in Minuteman silos. Public Law 97-377 establishes clearcut procedures that will produce a vote only on whether Congress approves the release of fiscal year 1983 funds for full-scale engineering development of the latest MX basing mode. Congress will not at that time be in a position to vote on the other elements of the Scowcroft Commission recommendations.

We are all tired of hearing the MX debated. Some have developed the attitude, "We've been discussing this thing so long let's just get on with it." But it is the wrong system. It is expensive, to be sure. But more importantly, it ultimately could prove to be not the "bargaining chip" that its supporters suggest, but a move that would open a new and more terrifying chapter in the nuclear arms race. We can find a better system around which to build a bipartisan consensus.

DALE BUMPERS.

